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- Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan. 548, 368 (2001)
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- New Evidence for the Unified Scheme of BL Lacertae Objects and FR I Radio Galaxies. *J. M. Bai & Myung Gyoan Kim.* 548, 244 (2001)
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- BAZELL, D. Ensembles of Classifiers for Morphological Galaxy Classification. *D. Bazell & David W. Aha.* 548, 219 (2001)
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- Quasar Absorption Lines as a Function of Quasar Orientation Measures. *Gordon T. Richards, S. A. Laurent-Muehleisen, Robert H. Becker, & Donald G. York.* 547, 635 (2001)
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- BEHAR, EHUD. The Chandra Iron L X-Ray Line Spectrum of Capella. *Ehud Behar, Jean Cottam, & Steven M. Kahn.* 548, 966 (2001)
- BEKKI, KENJI. Starbursts in Multiple Galaxy Mergers. *Kenji Bekki.* 546, 189 (2001)
- Formation and Evolution of E+A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch.* 547, L17 (2001)
- BELL, ERIC F. A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and H $\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)
- BELL, J. F. Intrinsic and Reprocessed Optical Emission from the Companion to PSR J2051–0827. *B. W. Stappers, M. H. van Kerkwijk, J. F. Bell, & S. R. Kulkarni.* 548, L183 (2001)
- See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- BELL, ROGER A. The Importance of Fe I as a Continuous Opacity Source in the Solar Atmosphere. *Roger A. Bell, Suchitra C. Balachandran, & Manuel Bautista.* 546, L65 (2001)
- BELLONI, T. Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748–288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin.* 546, 1055 (2001)
- BELLOT RUBIO, LUIS R. Lagrangian and Eulerian Stratifications of Acoustic Oscillations through the Solar Photosphere. *Inés Rodríguez Hidalgo, Basilio Ruiz Cobo, Manuel Collados, & Luis R. Bellot Rubio.* 547, 491 (2001)
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- BEMPORAD, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- BERGER, D. H. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- BERGHÖFER, THOMAS. Extreme-Ultraviolet Emission in the Fornax Cluster of Galaxies. *Stuart Bowyer, Eric Korpela, & Thomas Berghöfer.* 548, L135 (2001)
- BERNARDI, M. Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger.* 546, 903 (2001)
- BERNARDINI, P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- BERNLÖHR, K. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- BERNSTEIN, M. P. The Abundances of Solid N $_2$  and Gaseous CO $_2$  in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira.* 548, 836 (2001)
- BERTIN, GIUSEPPE. Double Lenses. *Giuseppe Bertin & Marco Lombardi.* 546, 47 (2001)
- BETHE, H. A. Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe.* 547, 345 (2001)
- BEUERMANN, K. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- BHATTACHARJEE, A. Random Scattering and Anisotropic Turbulence of Shear-Alfvén Wave Packets. *A. Bhattacharjee & C. S. Ng.* 548, 318 (2001)
- BHATTACHARYA, D. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- BICKNELL, GEOFFREY V. The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube. *Geoffrey V. Bicknell & Jianke Li.* 548, L69 (2001)
- BIDA, T. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- BIERBAUM, VERONICA M. Reactions of C $_n^-$  and C $_n$ H $^-$  with Atomic and Molecular Hydrogen. *Cynthia Barchholtz, Theodore P. Snow, & Veronica M. Bierbaum.* 547, L171 (2001)
- BILOKON, H. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- BIRK, G. T. The Critical Velocity Effect as a Cause for the H $\alpha$  Emission from the Magellanic Stream. *C. Konz, H. Lesch, G. T. Birk, & H. Wiechen.* 548, 249 (2001)
- BISI, V. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- BJÖRNSSON, G. See JAUNSEN, A. O., et al. The Jet and Circumburst Stellar Wind of GRB 980519.



- BJORAKER, GORDON. A Sensitive Search for Methane in the Infrared Spectrum of  $\tau$  Bootis. *Günter Wiedemann, Drake Deming, & Gordon Bjoraker*. 546, 1068 (2001)
- BLACK, DAVID. A Combined *Hipparcos* and Multichannel Astrometric Photometer Study of the Proposed Planetary System of  $\rho$  Coronae Borealis. *George Gatewood, Inwoo Han, & David Black*. 548, L61 (2001)
- BLACK, DAVID C. Preliminary Astrometric Masses for Proposed Extrasolar Planetary Companions. *Inwoo Han, David C. Black, & George Gatewood*. 548, L57 (2001)
- BLACKMAN, ERIC G. Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae. *Eric G. Blackman, Adam Frank, & Carl Welch*. 546, 288 (2001)
- BLADES, J. CHRIS. Morphology and Evolution of the Large Magellanic Cloud Planetary Nebulae. *Richard A. Shaw, Letizia Stanghellini, Max Mutchler, Bruce Balick, & J. Chris Blades*. 548, 727 (2001)
- BLAKE, G. A. Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Joung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck*. 547, 1077 (2001)
- BLAKESLEE, JOHN P. The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- BLANK, DAVID L. The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux*. 546, L97 (2001)
- BLOEMHOF, E. E. Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. *K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler*. 548, 861 (2001)
- BLOISE, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- BLOUT, B. D. A Radio Telescope Search for Axions. *B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu*. 546, 825 (2001)
- BLUDMAN, SIDNEY. Smooth Energy: Cosmological Constant or Quintessence? *Sidney Bludman & Matts Roos*. 547, 77 (2001)
- BODEN, A. F. A Preliminary Visual Orbit of BY Draconis. *A. F. Boden & B. F. Lane*. 547, 1071 (2001)
- BODENHEIMER, PETER. On the Tidal Inflation of Short-Period Extrasolar Planets. *Peter Bodenheimer, D. N. C. Lin, & R. A. Mardling*. 548, 466 (2001)
- BÖRNER, G. Scaling Properties of the Redshift Power Spectrum: Theoretical Models. *Y. P. Jing & G. Börner*. 547, 545 (2001)
- BÖRST, H. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- BÖTTCHER, MARKUS. X-Ray Spectral Features from Gamma-Ray Bursts: Predictions of Progenitor Models. *Markus Böttcher & Chris L. Fryer*. 547, 338 (2001)
- BOGDAN, T. J. See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- BOHLIN, RALPH C. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- BOHRINGER, HANS. A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields. *T. E. Clarke, P. P. Kronberg, & Hans Bohringer*. 547, L111 (2001)
- BOJAHN, H. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- BOLATTO, ALBERTO D. See OJHA, ROOPESH, et al. AST/RO Observations of Atomic Carbon near the Galactic Center.
- BOLLER, TH. Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey*. 546, L91 (2001)
- BOLTON, C. T. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- BOLZ, O. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- BONAMANTE, MASSIMILIANO. The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies. *Massimiliano Bonamante, Richard Lieu, & Jonathan P. D. Mittaz*. 546, 805 (2001)
- The Extreme-Ultraviolet Excess Emission of the Virgo and A1795 Clusters: Reobservation with In Situ Background Measurements. *Massimiliano Bonamante, Richard Lieu, & Jonathan P. D. Mittaz*. 547, L7 (2001)
- BOND, J. RICHARD. Fast Cosmic Microwave Background Analyses via Correlation Functions. *István Szapudi, Simon Prunet, Dmitry Pogosyan, Alexander S. Szalay, & J. Richard Bond*. 548, L115 (2001)
- BONGIOVANNI, A. See SABBAY, C. N., et al. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- BONO, G. Star Counts across the Red Giant Branch Bump and Below. *G. Bono, S. Cassisi, M. Zoccali, & G. Piotto*. 546, L109 (2001)
- BOONE, L. M. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- BORGONOVO, LUIS. On the Hardness-Intensity Correlation in Gamma-Ray Burst Pulses. *Luis Borgonovo & Felix Ryde*. 548, 770 (2001)
- BORKOWSKI, KAZIMIERZ J. Supernova Remnants in the Sedov Expansion Phase: Thermal X-Ray Emission. *Kazimierz J. Borkowski, William J. Lyerly, & Stephen P. Reynolds*. 548, 820 (2001)
- BOUCHET, FRANCOIS R. A Simple Method for Computing the Nonlinear Mass Correlation Function with Implications for Stable Clustering. *Robert R. Caldwell, Roman Juszkiewicz, Paul J. Steinhardt, & Francois R. Bouchet*. 547, L93 (2001)
- BOUCHET, L. The SIGMA/Granat Telescope: Calibration and Data Reduction. *L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul*. 548, 990 (2001)
- BOUGERET, J.-L. Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret*. 548, L91 (2001)
- BOUVIER, JEROME. From the Top to the Bottom of the Main Sequence: A Complete Mass Function of the Young Open Cluster M35. *David Barrado y Navascués, John R. Stauffer, Jerome Bouvier, & Eduardo L. Martin*. 546, 1006 (2001)
- BOWEN, DAVID V. Where Are the Absorbers toward Q2302+029? *David V. Bowen, Raul Jimenez, Edward B. Jenkins, & Max Pettini*. 547, 39 (2001)
- BOWER, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- BOWER, G. C. Radio Variability of Sagittarius A\*—A 106 Day Cycle. *Jun-Hui Zhao, G. C. Bower, & W. M. Goss*. 547, L29 (2001)
- BOWYER, STUART. Extreme-Ultraviolet Emission in the Fornax Cluster of Galaxies. *Stuart Bowyer, Eric Korpela, & Thomas Berghöfer*. 548, L135 (2001)
- BOYD, R. N. Production of  $^2\text{H}$ ,  $^3\text{He}$ , and  $^7\text{Li}$  from Interactions between Jets and Clouds. *M. Farniano, J. Vandegriff, R. N. Boyd, T. Kajino, & P. Osmer*. 547, L21 (2001)
- BRADT, HALE V. The Correlated Intensity and Spectral Evolution of Cygnus X-1 during State Transitions. *Lingling Wen, Wei Cui, & Hale V. Bradt*. 546, L105 (2001)
- BRANCH, DAVID. SN 1984A and Delayed-Detonation Models of Type Ia Supernovae. *Eric J. Lentz, E. Baron, David Branch, & Peter H. Hauschildt*. 547, 402 (2001)
- See LENTZ, ERIC J., et al. Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- BRANDT, W. N. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L13 (2001)
- Heavy X-Ray Absorption in Soft X-Ray-Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyomoto*. 546, 795 (2001)
- BREGMAN, JOEL N. Iron Abundance Profiles of 12 Clusters of Galaxies Observed with *BeppoSAX*. *Jimmy A. Irwin & Joel N. Bregman*. 546, 150 (2001)
- Emission Mechanisms in X-Ray-faint Galaxies. *Beth A. Brown & Joel N. Bregman*. 547, 154 (2001)
- Velocity Gradients in the Intracluster Gas of the Perseus Cluster. *Renato A. Dupke & Joel N. Bregman*. 547, 705 (2001)



- Are There Advection-dominated Accretion Flows in Nearby Giant Elliptical Galaxies? *Martin E. Sulkani & Joel N. Bregman*. 548, L131 (2001)
- BRESOLIN, FABIO. Stellar Spectroscopy Far beyond the Local Group. *Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla*. 548, L159 (2001)
- BRICENO, C. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- BRICKHOUSE, NANCY S. Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin*. 548, L81 (2001)
- BRIGGS, MICHAEL S. See MITROFANOV, IGOR G., et al. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts.
- BRIGIDA, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- BRINKMAN, A. C. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091.
- BRINKMANN, JON. See OENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- BRODIE, JEAN P. The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch*. 548, 550 (2001)
- BROMLEY, B. C. Estimation of Relativistic Accretion Disk Parameters from Iron Line Emission. *V. I. Pariev, B. C. Bromley, & W. A. Miller*. 547, 649 (2001)
- BROTHERTON, M. S. QSO 2359-1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack*. 546, 134 (2001)
- Composite Spectra from the FIRST Bright Quasar Survey. *M. S. Brotherton, Hien D. Tran, R. H. Becker, Michael D. Gregg, S. A. Laurent-Muehleisen, & R. L. White*. 546, 775 (2001)
- BROTHERTON, MICHAEL S. The Intrinsic Absorber in QSO 2359-1241: KECK and Hubble Space Telescope Observations. *Nahum Arav, Michael S. Brotherton, Robert H. Becker, Michael D. Gregg, Richard L. White, Trevor Price, & Warren Hack*. 546, 140 (2001)
- BROWN, BETH A. Emission Mechanisms in X-Ray-faint Galaxies. *Beth A. Brown & Joel N. Bregman*. 547, 154 (2001)
- BROWN, G. E. Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe*. 547, 345 (2001)
- BROWN, JOHN M. A Measurement of the Rotational Spectrum of the CH Radical in the Far-Infrared. *Steven A. Davidson, Kenneth M. Evenson, & John M. Brown*. 546, 330 (2001)
- BRUHWEILER, FRED C. Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cherie L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth*. 546, 866 (2001)
- BRUZUAL, G. See SABBEY, C. N., et al. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- BRYAN, GREG L. The Metal Enrichment and Temperature of the Intergalactic Medium. *Renyue Cen & Greg L. Bryan*. 546, L81 (2001)
- Simulations of Pregalactic Structure Formation with Radiative Feedback. *Marie E. Machacek, Greg L. Bryan, & Tom Abel*. 548, 509 (2001)
- Confusion of Diffuse Objects in the X-Ray Sky. *G. Mark Voit, August E. Evrard, & Greg L. Bryan*. 548, L123 (2001)
- BUCHALTER, A. An Efficient Search for Gravitationally Lensed Radio Lobes. *J. Lehar, A. Buchalter, R. G. McMahon, C. S. Kochanek, & T. W. B. Muxlow*. 546, 60 (2001)
- BULLOCK, JAMES S. Hierarchical Galaxy Formation and Substructure in the Galaxy's Stellar Halo. *James S. Bullock, Andrey V. Kravtsov, & David H. Weinberg*. 548, 33 (2001)
- BUOTE, DAVID A. Oxygen Absorption in M87: Evidence for a Warm+Hot Interstellar Medium. *David A. Buote*. 548, 652 (2001)
- BURDERI, L. A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba*. 547, 412 (2001)
- Probing the Inner Region of Cygnus X-1 in the Low/Hard State through Its X-Ray Broadband Spectrum. *T. Di Salvo, C. Done, P. T. Zycki, L. Burderi, & N. R. Robba*. 547, 1024 (2001)
- A Hard Tail in the Broadband Spectrum of the Dipper XB 1254-690. *R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba*. 548, 883 (2001)
- BUREAU, M. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- BURKE, D. J. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- BURKERT, ANDREAS. Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of *r*-Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert*. 547, 217 (2001)
- BUSSINO, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CAFAGNA, F. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CAGNONI, I. Four Years of Extreme Ultraviolet Observations of Markarian 421. I. Spectral Analysis. *I. Cagnoni & A. Fruscione*. 546, 877 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. *I. Cagnoni, I. E. Papadakis, & A. Fruscione*. 546, 886 (2001)
- CAILLAULT, J.-P. Ages of A-Type Vega-like Stars from *uvby* Photometry. *Inseok Song, J.-P. Caillault, David Barrado y Navascués, & John R. Stauffer*. 546, 352 (2001)
- CALDWELL, ROBERT R. A Simple Method for Computing the Nonlinear Mass Correlation Function with Implications for Stable Clustering. *Robert R. Caldwell, Roman Juszkiewicz, Paul J. Steinhardt, & Francois R. Bouchet*. 547, L93 (2001)
- CALICCHIO, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CALLY, P. S. Note on an Exact Solution for Magnetospheric Waves. *P. S. Cally*. 548, 473 (2001)
- See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- CALVET, NURIA. Infall Models of Class 0 Protostars. *Ray Jayawardhana, Lee Hartmann, & Nuria Calvet*. 548, 310 (2001)
- CAMILO, F. Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo*. 548, L171 (2001)
- Discovery of Five Binary Radio Pulsars. *F. Camilo, A. G. Lyne, R. N. Manchester, J. F. Bell, I. H. Stairs, N. D'Amico, V. M. Kaspi, A. Possenti, F. Crawford, & N. P. F. McKay*. 548, L187 (2001)
- CAMILO, FERNANDO. A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne*. 546, L25 (2001)
- CAMPANA, D. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CANIZARES, C. R. Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the *Chandra* High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe*. 547, L25 (2001)
- CANTO, J. Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). *L. López-Martín, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto*. 548, 288 (2001)
- CAPPELLARO, ENRICO. Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto*. 547, 988 (2001)
- CAPPI, M. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters. *M. Cappi, P. Mazzotta, M. Elvis, D. J. Burke, A. Comastri, F. Fiore, W. Forman, A. Fruscione, P. Green, D. Harris, E. J. Hooper, C. Jones, J. S. Kaastra, E. Kellogg, S. Murray, B. McNamara, F. Nicastro, T. J. Ponman, E. M. Schlegel, A. Siemiginowska, H. Tananbaum, A. Vikhlinin, S. Virani, & B. Wilkes*. 548, 624 (2001)
- CARBONI, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.

- CARILLI, C. L. Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian*. 547, 731 (2001)
- CARLBERG, R. G. The Evolution of Population Gradients in Galaxy Clusters: The Butcher-Oemler Effect and Cluster Infall. *E. Ellingson, H. Lin, H. K. C. Yee, & R. G. Carlberg*. 547, 609 (2001)
- See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- CARLSSON, M. See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- CAROLLO, C. MARCELLA. *Hubble Space Telescope* Optical-Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe*. 546, 216 (2001)
- See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauroon Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- The Metallicity of  $0.5 < z < 1$  Field Galaxies. *C. Marcella Carollo & Simon J. Lilly*. 548, L153 (2001)
- CARPENTER, JOHN M. Periodic Photometric Variability in the Becklin-Neugebauer Object. *Lynne A. Hillenbrand, John M. Carpenter, & M. F. Skrutskie*. 547, L53 (2001)
- CARRARO, C. Vibrational Spectra of Hydrogenated Buckminsterfullerene: A Candidate for the Unidentified Infrared Emission. *C. R. Stoldt, R. Maboudian, & C. Carraro*. 548, L225 (2001)
- CASARES, JORGE. Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi. *Pablo Rodriguez-Gil, Jorge Casares, Ignacio G. Martinez-Pais, Pasi Hakala, & Danny Steeghs*. 548, L49 (2001)
- CASSINELLI, JOSEPH P. *Chandra* Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis. *Wayne L. Waldron & Joseph P. Cassinelli*. 548, L45 (2001)
- CASSISI, S. Star Counts across the Red Giant Branch Bump and Below. *G. Bono, S. Cassisi, M. Zoccali, & G. Piotto*. 546, L109 (2001)
- CASTRO, SANDRA. Spatial/Spectral Resolution of a Galactic Bulge K3 Giant Stellar Atmosphere via Gravitational Microlensing. *Sandra Castro, Richard W. Pogge, R. Michael Rich, D. L. DePoy, & Andrew Gould*. 548, L197 (2001)
- CECATTO, J. R. Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Savant, & J. A. C. F. Neri*. 548, L87 (2001)
- CECCHINI, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CEI, F. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CEN, RYNYUE. Decaying Cold Dark Matter Model and Small-Scale Power. *Renyue Cen*. 546, L77 (2001)
- The Metal Enrichment and Temperature of the Intergalactic Medium. *Renyue Cen & Greg L. Bryan*. 548, L81 (2001)
- CERNICARO, JOSÉ. *Infrared Space Observatory's* Discovery of  $C_4H_2$ ,  $C_6H_2$ , and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters*. 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters*. 546, L127 (2001)
- CHAE, JONGCHUL. A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang*. 547, L85 (2001)
- Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang*. 548, 497 (2001)
- CHAFEE, F. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- CHAKRABARTY, DEEPTO. The Central X-Ray Point Source in Cassiopeia A. *Deepto Chakrabarty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan*. 548, 800 (2001)
- CHALLIS, P. M. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- CHAMBERLIN, RICHARD A. See OJHA, ROOPESH, et al. AST/RO Observations of Atomic Carbon near the Galactic Center.
- CHAN, KIN-WING. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium. *Kin-Wing Chan, T. L. Roellig, T. Onaka, M. Mizutani, K. Okumura, I. Yamamura, T. Tanabé, H. Shibai, T. Nakagawa, & H. Okuda*. 546, 273 (2001)
- CHAN, KWING L. Rotating Convection in  $f$ -Planes: Mean Flow and Reynolds Stress. *Kwing L. Chan*. 548, 1102 (2001)
- CHANG, HEON-YOUNG. Effects of Luminosity Functions Induced by Relativistic Beaming on the Statistics of Cosmological Gamma-Ray Bursts. *Chunglee Kim, Heon-Young Chang, & Insu Yi*. 548, 532 (2001)
- CHANTRELL, M. C. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- CHAO, J. K. A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon*. 547, 1159 (2001)
- CHAPMAN, JESSICA M. A Shock-excited OH Maser in a Post-Asymptotic Giant Branch Envelope? *Maartje N. Sevenster & Jessica M. Chapman*. 546, L119 (2001)
- CHAPMAN, S. C. The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger*. 548, L147 (2001)
- CHAPMAN, SCOTT C. Submillimeter Imaging of a Protocluster Region at  $z = 3.09$ . *Scott C. Chapman*. 548, L17 (2001)
- CHARNLEY, S. B. Chemical Differentiation in Regions of Massive Star Formation. *S. D. Rodgers & S. B. Charnley*. 546, 324 (2001)
- CHARTAS, G. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L13 (2001)
- CHEN, C. H. ROSIE. A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel*. 547, 754 (2001)
- CHEN, Y. Q. The Abundance Patterns of Sirius and Vega. *H. M. Qui, G. Zhao, Y. Q. Chen, & Z. W. Li*. 548, 953 (2001)
- CHENG, K.-P. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- CHIANG, E. I. Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Joung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck*. 547, 1077 (2001)
- CHIANG, JAMES. Simulations of Accretion Flows Crossing the Last Stable Orbit. *Philip J. Armitage, Christopher S. Reynolds, & James Chiang*. 548, 868 (2001)
- CHIAPPETTI, L. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- CHIAR, J. E. A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr*. 547, L161 (2001)
- CHIARELLA, V. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CHIBA, SATOSHI. Magnetic Field Effect on Masses of Atomic Nuclei. *V. N. Kondratyev, Toshiki Maruyama, & Satoshi Chiba*. 546, 1137 (2001)
- CHIBARO, SERGIO. Plasmoid Formation and Acceleration in the Solar Streamer Belt. *Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli*. 547, 1167 (2001)
- CHIUH, TZIHONG. Radial Density and Temperature Profiles of the Intracluster Gas Constructed Jointly from the X-Ray Surface Brightness Measurement and the Universal Density Profile. *Xiang-Ping Wu & Tzihong Chiu*. 547, 82 (2001)
- CHOUDHARY, B. C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- CHU, YOU-HUA. A Search for Jovian Planets around Hot White Dwarfs. *You-Hua Chu, Bryan C. Dunne, & Robert A. Gruendl*. 546, L61 (2001)
- A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel*. 547, 754 (2001)
- CIARDULLO, ROBIN. A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel*. 547, 754 (2001)

- CIMATTI, ANDREA. Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Day, Wil van Breugel, & Hyron Spinrad.* 547, 667 (2001)
- CIOLEK, GLENN E. On the Timescale for the Formation of Protostellar Cores in Magnetic Interstellar Clouds. *Glenn E. Ciolek & Shantanu Basu.* 547, 272 (2001)
- CLARKE, T. E. A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields. *T. E. Clarke, P. P. Kronberg, & Hans Bohringer.* 547, L111 (2001)
- CLAUSSEN, M. J. The Extreme Scattering Event toward 1741-038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston.* 546, 267 (2001)
- COE, M. J. Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from RXTE Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler.* 548, L41 (2001)
- COHN, HALDAN. Stellar Variability in the Metal-rich, Obscured Globular Cluster Terzan 5. *Peter D. Edmonds, Jonathan E. Grindlay, Haldan Cohn, & Phyllis Lugger.* 547, 829 (2001)
- COLLADOS, MANUEL. Lagrangian and Eulerian Stratifications of Acoustic Oscillations through the Solar Photosphere. *Inés Rodríguez Hidalgo, Basilio Ruiz Cobo, Manuel Collados, & Luis R. Bellot Rubio.* 547, 491 (2001)
- COLLESS, MATTHEW. Substructure and Dynamics of the Fornax Cluster. *Michael J. Drinkwater, Michael D. Gregg, & Matthew Colless.* 548, L139 (2001)
- COLLINS, NICHOLAS R. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- Wide-Field Imaging of the Hubble Deep Field-South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate.* 548, 127 (2001)
- COLPI, MONICA. Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)
- Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)
- COMASTRI, A. See CAPPI, M., et al. Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- CONNER, Z. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- CONNORS, ALANNA. Analysis of Energy Spectra with Low Photon Counts via Bayesian Posterior Simulation. *David A. van Dyk, Alanna Connors, Vinay L. Kashyap, & Aneta Siemiginowska.* 548, 224 (2001)
- CONRAD, A. R. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- CONTRERAS, J. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- CONTURSI, ALESSANDRA. Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Helou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi.* 548, L73 (2001)
- COORAY, ASANTHA. Weak Gravitational Lensing Bispectrum. *Asantha Cooray & Wayne Hu.* 548, 7 (2001)
- COPIN, Y. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- COPPI, P. See SABBAY, C. N., et al. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- CORA, SOFIA A. On the Effect of Chaotic Orbits on Dynamical Friction. *Sofia A. Cora, M. Marcela Vergne, & Juan C. Muzzio.* 546, 165 (2001)
- CORBET, R. H. D. Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from RXTE Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler.* 548, L41 (2001)
- CORCORAN, M. F. The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre.* 547, 1034 (2001)
- CORDES, J. M. Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia A. *M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern.* 547, L41 (2001)
- CORRADI, ROMANO L. M. Low-Ionization Structures in Planetary Nebulae: Confronting Models with Observations. *Denise R. Gonçalves, Romano L. M. Corradi, & Antonio Mampaso.* 547, 302 (2001)
- CORREIA, E. Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer.* 548, L95 (2001)
- CORTINA, J. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- COSTA, J. E. R. Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer.* 548, L95 (2001)
- CÔTÉ, PATRICK. Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent.* 548, 592 (2001)
- COTTAM, JEAN. The Chandra Iron L X-Ray Line Spectrum of Capella. *Ehud Behar, Jean Cottam, & Steven M. Kahn.* 548, 966 (2001)
- COUCH, WARRICK J. Formation and Evolution of E+A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch.* 547, L17 (2001)
- COUTU, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- COUVAULT, C. E. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- CRAIG, WILLIAM W. The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch.* 548, 550 (2001)
- CRAWFORD, F. See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- CREECH-EAKMAN, M. J. Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with Infrared Space Observatory LWS Observations. *E. I. Chiang, M. K. Jung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)
- CRENSHAW, D. M. See TURNER, T. J., et al. Chandra Grating Spectroscopy of the Seyfert Galaxy Ton S180.
- CROOKS, JAMES L. Relic Neutrinos and Z-Resonance Mechanism for Highest Energy Cosmic Rays. *James L. Crooks, James O. Dunn, & Paul H. Frampton.* 546, L1 (2001)
- CROWTHER, PAUL A. Physical Parameters of Erupting Luminous Blue Variables: NGC 2363-V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier.* 546, 484 (2001)
- CRUSIUS-WÄTZEL, ANDRÉ R. Synchrotron Model for the Infrared, Optical, and X-Ray Emission of the Crab Pulsar. *André R. Crusius-Wätz, Thomas Kunz, & Harald Lesch.* 546, 401 (2001)
- CSABAI, ISTVÁN. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- CUI, WEI. The Correlated Intensity and Spectral Evolution of Cygnus X-1 during State Transitions. *Lingling Wen, Wei Cui, & Hale V. Bradt.* 546, L105 (2001)
- Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7-2942. *Wei Cui, N. S. Schulz, F. K. Baganoff, M. W. Bautz, J. P. Doty, G. P. Garmire, I. F. Mirabel, G. R. Ricker, L. F. Rodríguez, & S. C. Taylor.* 548, 394 (2001)
- CUSUMANO, G. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with BeppoSAX.
- CUTRI, R. M. Near-Infrared Imaging and O I Spectroscopy of IC 443 Using 2MASS and Infrared Space Observatory. *Jeonghee Rho, T. H. Jarrett, R. M. Cutri, & W. T. Reach.* 547, 885 (2001)
- CUZZI, JEFFREY N. Size-selective Concentration of Chondrules and Other Small Particles in Protoplanetary Nebula Turbulence. *Jeffrey N. Cuzzi, Robert C. Hogan, Julie M. Paque, & Anthony R. Dobrovol'skiis.* 546, 496 (2001)
- DÄPPEN, WERNER. MHD Equation of State with Relativistic Electrons. *Zhigang Gong, Werner Däppen, & Ladislav Zejda.* 546, 1178 (2001)



- DAHLBURG, RUSSELL B. Plasmoid Formation and Acceleration in the Solar Streamer Belt. *Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli*. 547, 1167 (2001)
- DAI, B. Z. Search for Short Variability Timescale of the GeV Gamma-Ray-loud Blazars. *G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing*. 548, 200 (2001)
- DAI, Z. G. Prompt High-Energy Gamma-Ray Emission from Synchrotron Self-Compton Process in the Reverse Shocks of Gamma-Ray Bursts. *X. Y. Wang, Z. G. Dai, & T. Lu*. 546, L33 (2001)
- DALE, DANIEL A. Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Heiou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi*. 548, L73 (2001)
- DAL FIUME, D. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- DAME, T. M. The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus*. 547, 792 (2001)
- DAMIANI, F. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- D'AMICO, FLAVIO. High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Transients in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber*. 547, L147 (2001)
- D'AMICO, N. Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo*. 548, L171 (2001)
- See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- D'ANGELO, GENNARO. Three-dimensional Simulations of a Planet Embedded in a Protoplanetary Disk. *Wilhelm Kley, Gennaro D'Angelo, & Thomas Henning*. 547, 457 (2001)
- DANKS, ANTHONY C. Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia*. 547, L155 (2001)
- DAR, ARNON. What is the Cosmic-Ray Luminosity of Our Galaxy? *Arnon Dar & A. De Rújula*. 547, L33 (2001)
- DARTOIS, E. Methylpolynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters*. 546, L127 (2001)
- DAUBAR, I. J. The Approaching Death of the OH/IR Star IRAS 18455+0448. *B. M. Lewis, B. D. Oppenheimer, & I. J. Daubar*. 548, L77 (2001)
- DAVÉ, ROMÉEL. Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt*. 547, 574 (2001)
- DAVIDSON, KRIS. *Hubble Space Telescope* Proper-Motion Measurements of the  $\eta$  Carinae Nebula. *Jon A. Morse, James R. Kellogg, John Bally, Kris Davidson, Bruce Balick, & Dennis Ebbets*. 548, L207 (2001)
- DAVIDSON, STEVEN A. A Measurement of the Rotational Spectrum of the CH Radical in the Far-Infrared. *Steven A. Davidson, Kenneth M. Evenson, & John M. Brown*. 546, 330 (2001)
- DAVIES, ROGER L. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw*. 548, L33 (2001)
- DAVILA, J. M. Huge Coronal Structure and Heating Constraints Determined from SERTS Observations. *D. A. Falconer & J. M. Davila*. 547, 1109 (2001)
- DAVIS, JOHN P. The Formal Underpinnings of the Response Functions Used in X-Ray Spectral Analysis. *John P. Davis*. 548, 1010 (2001)
- DAW, E. J. A Radio Telescope Search for Axions. *B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu*. 546, 825 (2001)
- DAYAL, ADITYA. Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman*. 548, 1020 (2001)
- DE BRUYNE, V. Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger*. 546, 903 (2001)
- DE CARVALHO, R. R. The Butcher-Oemler Effect in 295 Clusters: Strong Redshift Evolution and Cluster Richness Dependence. *V. E. Margoniner, R. R. de Carvalho, R. R. Gal, & S. G. Djorgovski*. 548, L143 (2001)
- DE CARVALHO, REINALDO. Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho*. 547, 187 (2001)
- DE CATALDO, G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- DECOWSKI, M. P. A Radio Telescope Search for Axions. *B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu*. 546, 825 (2001)
- DEDIKOV, S. YU. A New Model for the Spiral Structure of the Galaxy. Superposition of 2- and 4-armed Patterns. *J. R. D. Lépine, Yu. N. Mishurov, & S. Yu. Dedikov*. 546, 234 (2001)
- DEFORREST, C. E. Observation of Polar Plumes at High Solar Altitudes. *C. E. DeForest, S. P. Plunkett, & M. D. Andrews*. 546, 569 (2001)
- DE GOUVEIA DAL PINO, ELISABETE M. Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. *Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath*. 548, L193 (2001)
- DEHNEN, WALTER. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- DEJONGHE, H. Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger*. 546, 903 (2001)
- DEJONGHE, HERWIG. *Hubble Space Telescope* Optical-Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe*. 546, 216 (2001)
- DEKHSI, H. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- DE KOOL, MARTIN. Keck HIRES Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. *Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista*. 548, 609 (2001)
- DELGADO-MARTÍ, HUGO. The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport*. 546, 455 (2001)
- DELLA PRUGNA, F. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- DELLO RUSSO, N. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- DEL SORDO, S. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- DEL TORO INIESTA, J. C. Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich*. 547, 1130 (2001)
- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet*. 547, 1148 (2001)
- DE LUCA, E. E. Magnetic Diffusion in Stratified Atmospheres. *E. E. DeLuca & N. E. Hurlburt*. 548, 1093 (2001)
- DE MARZO, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- DEMING, DRAKE. A Sensitive Search for Methane in the Infrared Spectrum of  $\tau$  Bootis. *Günter Wiedemann, Drake Deming, & Gordon Bjoraker*. 546, 1068 (2001)
- DE MITRI, I. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- DEN BOGGENDE, A. J. F. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091.
- DENG, M. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- DENG, YUANYONG. Magnetic Flux Cancellation Associated with the Major Solar Event on 2000 July 14. *Jun Zhang, Jingxiu Wang, & Yuanyong Deng*. 548, L99 (2001)
- DENNINGHOFF, S. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- DEPOY, D. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.

- DEPOY, D. L. Spatial/Spectral Resolution of a Galactic Bulge K3 Giant Stellar Atmosphere via Gravitational Microlensing. *Sandra Castro, Richard W. Pogge, R. Michael Rich, D. L. Depoy, & Andrew Gould*. 548, L197 (2001)
- DERKAOU, J. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- DE RÚJULA, A. What is the Cosmic-Ray Luminosity of Our Galaxy? *Arnon Dar & A. De Rújula*. 547, L33 (2001)
- DESHPANDE, A. A. Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia A. *M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern*. 547, L41 (2001)
- DEUTSCH, LYNNE K. Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman*. 548, 1020 (2001)
- DEVEREUX, NICK. The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux*. 546, L97 (2001)
- DE VICENTE, P. Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodriguez-Fernandez, & A. Fuente*. 548, L65 (2001)
- DE VINCENTI, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- DEY, ARJUN. Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad*. 547, 667 (2001)
- DE ZEEUW, P. TIM. Hubble Space Telescope Optical-Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe*. 546, 216 (2001)
- See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- DICKEL, JOHN R. The Radio Structure of the Supernova Remnant G315.4-2.3 (MSH 14-63). *John R. Dickel, Richard G. Strom, & D. K. Milne*. 546, 447 (2001)
- DI CREDICO, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- DI MATTEO, T. Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748-288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin*. 546, 1055 (2001)
- Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian*. 547, 731 (2001)
- DI MATTEO, TIZIANA. X-Ray Images of Hot Accretion Flows. *Feryal Özel & Tiziana Di Matteo*. 548, 213 (2001)
- DING, M. D. Quiet-Sun Variability in a Temperature Minimum Region. *Y. X. Zhang, C. Fang, M. D. Ding, & W. C. Livingston*. 547, L179 (2001)
- DI SALVO, T. Study of the Temporal Behavior of 4U 1728-34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba*. 546, 1107 (2001)
- A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba*. 547, 412 (2001)
- Probing the Inner Region of Cygnus X-1 in the Low/Hard State through Its X-Ray Broadband Spectrum. *T. Di Salvo, C. Done, P. T. Zycki, L. Burderi, & N. R. Robba*. 547, 1024 (2001)
- A Hard Tail in the Broadband Spectrum of the Dipper XB 1254-690. *R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba*. 548, 883 (2001)
- DISANTIL, M. A. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- DIJORGovski, S. G. The Butcher-Oemler Effect in 295 Clusters: Strong Redshift Evolution and Cluster Richness Dependence. *V. E. Margoniner, R. R. de Carvalho, R. R. Gal, & S. G. Djorgovski*. 548, L143 (2001)
- DMITRUK, P. Wave-driven Turbulent Coronal Heating in Open Field Line Regions: Nonlinear Phenomenological Model. *P. Dmitruk, L. J. Milano, & W. H. Matthaeus*. 548, 482 (2001)
- DOBROVolskis, ANTHONY R. Size-selective Concentration of Chondrules and Other Small Particles in Protoplanetary Nebula Turbulence. *Jeffrey N. Cuzzi, Robert C. Hogan, Julie M. Paque, & Anthony R. Dobrovolskis*. 546, 496 (2001)
- DONE, C. Observational Signatures of X-Ray-irradiated Accretion Disks. *C. Done & S. Nayakshin*. 546, 419 (2001)
- Probing the Inner Region of Cygnus X-1 in the Low/Hard State through Its X-Ray Broadband Spectrum. *T. Di Salvo, C. Done, P. T. Zycki, L. Burderi, & N. R. Robba*. 547, 1024 (2001)
- DOSCHEK, G. A. Properties of Solar Polar Coronal Hole Plasmas Observed above the Limb. *G. A. Doschek, U. Feldman, J. M. Laming, U. Schühle, & K. Wilhelm*. 546, 559 (2001)
- DOTTORI, HORACIO. Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho*. 547, 187 (2001)
- DOTY, J. P. See CUI, WEI, et al. Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7-2942.
- DRAGOVAN, M. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- DRAINE, B. T. Constraints on Cold H $_2$  Clouds from Gravitational Microlensing Searches. *R. R. Rafikov & B. T. Draine*. 547, 207 (2001)
- Dust Grain-Size Distributions and Extinction in the Milky Way, Large Magellanic Cloud, and Small Magellanic Cloud. *Joseph C. Weingartner & B. T. Draine*. 548, 296 (2001)
- DRAKE, J. J. See HARNDEN, F. R., JR., et al. Chandra Observations of the Open Cluster NGC 2516.
- DRAKE, JEREMY J. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the Chandra LETGS Spectrum of X0614+091.
- Observability of Stellar Winds from Late-Type Dwarfs via Charge Exchange X-Ray Emission. *Bradford J. Wargelin & Jeremy J. Drake*. 546, L57 (2001)
- The Coronal Metallicity of the Intermediate Activity Dwarf  $\xi$  Bootis A. *Jeremy J. Drake & Vinay Kashyap*. 547, 428 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huemmoerder, Randall Smith, & Bradford J. Wargelin*. 548, L81 (2001)
- DRESSLER, ALAN. The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- DRINKWATER, MICHAEL J. Substructure and Dynamics of the Fornax Cluster. *Michael J. Drinkwater, Michael D. Gregg, & Matthew Colless*. 548, L139 (2001)
- DRISSEN, LAURENT. Physical Parameters of Erupting Luminous Blue Variables: NGC 2363-V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier*. 546, 484 (2001)
- D'SILVA, S. A Note on Helioseismic Tomography. *S. D'Silva*. 547, L81 (2001)
- Time-Distance Helioseismology at High Frequencies. *S. D'Silva*. 548, L107 (2001)
- DUNN, JAMES O. Relic Neutrinos and Z-Resonance Mechanism for Highest Energy Cosmic Rays. *James L. Crooks, James O. Dunn, & Paul H. Frampton*. 546, L1 (2001)
- DUNNE, BRYAN C. A Search for Jovian Planets around Hot White Dwarfs. *You-Hua Chu, Bryan C. Dunne, & Robert A. Gruendl*. 546, L61 (2001)
- DUPKE, RENATO A. Velocity Gradients in the Intracluster Gas of the Perseus Cluster. *Renato A. Dupke & Joel N. Bregman*. 547, 705 (2001)
- Central Elemental Abundance Ratios in the Perseus Cluster: Resonant Scattering or SN Ia Enrichment? *Renato A. Dupke & Keith A. Arnaud*. 548, 141 (2001)
- EBBETS, DENNIS. Hubble Space Telescope Proper-Motion Measurements of the  $\eta$  Carinae Nebula. *Jon A. Morse, James R. Kellogg, John Bally, Kris Davidson, Bruce Balick, & Dennis Ebbets*. 548, L207 (2001)
- EBELING, HARALD. Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- EBISAWA, KEN. ASCA Observation of an "X-Ray Shadow" in the Galactic Plane. *Sangwook Park & Ken Ebisawa*. 547, 777 (2001)
- EDELSON, R. An RXTE Survey of Long-Term X-Ray Variability in Seyfert 1 Galaxies. *A. Markowitz & R. Edelson*. 547, 684 (2001)
- EDELSON, RICK. Evidence for Rapid Iron K $\alpha$  Line Flux Variability in MGC -6-30-15. *Simon Vaughan & Rick Edelson*. 548, 694 (2001)
- EDGAR, RICHARD J. RXJ 0852.0-0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2-1.2). *Patrick Slane, John P. Hughes,*

- Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach. 548, 814 (2001)
- EDMONDS, PETER D. Stellar Variability in the Metal-rich, Obscured Globular Cluster Terzan 5. *Peter D. Edmonds, Jonathan E. Grindlay, Haldan Cohn, & Phyllis Lugger*. 547, 829 (2001)
- EDWARDS, R. T. Discovery of Two Relativistic Neutron Star-White Dwarf Binaries. *R. T. Edwards & M. Bailes*. 547, L37 (2001)
- EIKENBERRY, STEPHEN S. A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne*. 546, L25 (2001)
- EINAUDI, GIORGIO. Plasmoid Formation and Acceleration in the Solar Streamer Belt. *Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli*. 547, 1167 (2001)
- EISENSTEIN, DANIEL J. Correlations in the Spatial Power Spectra Inferred from Angular Clustering: Methods and Application to the Automated Plate Measuring Survey. *Daniel J. Eisenstein & Matias Zaldarriaga*. 546, 2 (2001)
- ELLINGSON, E. The Evolution of Population Gradients in Galaxy Clusters: The Butcher-Oemler Effect and Cluster Infall. *E. Ellingson, H. Lin, H. K. C. Yee, & R. G. Carlberg*. 547, 609 (2001)
- ELLMAN, N. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- ELMEGREEN, BRUCE G. A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungeun Kim, & Lister Staveley-Smith*. 548, 749 (2001)
- ELVIS, M. Heavy X-Ray Absorption in Soft X-Ray-Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Willis, & N. Iyomoto*. 546, 795 (2001)
- See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- ELVIS, MARTIN. Accretion Disk Instabilities, Cold Dark Matter Models, and Their Role in Quasar Evolution. *Evanthia Hatziminaoglou, Aneta Siemiginowska, & Martin Elvis*. 547, 90 (2001)
- EMMET, W. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- EMSELMER, ERIC. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- ENGELBRACHT, C. W. NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen*. 546, 952 (2001)
- ERLING, P. A. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- ERRIQUEZ, O. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- ESIN, ANN A. On the Synchrotron Self-Compton Emission from Relativistic Shocks and Its Implications for Gamma-Ray Burst Afterglows. *Re'em Sari & Ann A. Esin*. 548, 787 (2001)
- EVANS, N. R. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- EVANS, N. W. The Stability of Disks in Cusped Potentials. *J. A. Sellwood & N. W. Evans*. 546, 176 (2001)
- EVENSON, KENNETH M. A Measurement of the Rotational Spectrum of the CH Radical in the Far-Infrared. *Steven A. Davidson, Kenneth M. Evenson, & John M. Brown*. 546, 330 (2001)
- EVARD, A. E. Four Measures of the Intracluster Medium Temperature and Their Relation to a Cluster's Dynamical State. *B. F. Mathiesen & A. E. Evard*. 546, 100 (2001)
- EVARD, AUGUST E. Confusion of Diffuse Objects in the X-Ray Sky. *G. Mark Voit, August E. Evard, & Greg L. Bryan*. 548, L123 (2001)
- FABER, JOSHUA A. Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren*. 548, 323 (2001)
- FABIAN, A. C. Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian*. 547, 731 (2001)
- FAIRLEY, B. W. Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- FALCO, E. E. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- FALCONER, D. A. Huge Coronal Structure and Heating Constraints Determined from SERTS Observations. *D. A. Falconer & J. M. Davila*. 547, 1109 (2001)
- FALLON, T. J. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- FALOMO, RENATO. Near-Infrared Imaging of the Host Galaxies of Three Radio-loud Quasars at  $z \sim 1.5$ . *Renato Falomo, Jari Kotilainen, & Aldo Treves*. 547, 124 (2001)
- FAMIANO, M. Production of  $^2\text{H}$ ,  $^3\text{He}$ , and  $^7\text{Li}$  from Interactions between Jets and Clouds. *M. Famiano, J. Vandeagriff, R. N. Boyd, T. Kajino, & P. Osmer*. 547, L21 (2001)
- FAN, Y. Nonlinear Growth of the Three-dimensional Undular Instability of a Horizontal Magnetic Layer and the Formation of Arching Flux Tubes. *Y. Fan*. 546, 509 (2001)
- The Effects of Rotation on the Evolution of Rising Omega Loops in a Stratified Model Convection Zone. *W. P. Abbett, G. H. Fisher, & Y. Fan*. 546, 1194 (2001)
- FANELLI, MICHAEL N. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- FANG, C. Quiet-Sun Variability in a Temperature Minimum Region. *Y. X. Zhang, C. Fang, M. D. Ding, & W. C. Livingston*. 547, L179 (2001)
- FARRAR, GLENNYS R. Neutron Stars with a Stable, Light Supersymmetric Baryon. *Shmuel Balberg, Glennys R. Farrar, & Tsvi Piran*. 548, L179 (2001)
- FAVATA, F. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- FAVUZZI, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- FAZIO, GIOVANNI G. Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman*. 548, 1020 (2001)
- FEDCHAK, J. A. Absorption  $f$  of Ti II Vacuum Ultraviolet Resonance Transitions. *L. M. Wiese, J. A. Fedchak, & J. E. Lawler*. 547, 1178 (2001)
- FELDMAN, HUME A. The Bispectrum of IRAS Redshift Catalogs. *Roman Scoccimarro, Hume A. Feldman, J. N. Fry, & Joshua A. Frieman*. 546, 652 (2001)
- FELDMAN, U. The Solar Helium Abundance in the Outer Corona Determined from Observations with SUMER/SOHO. *J. M. Laming & U. Feldman*. 546, 552 (2001)
- Properties of Solar Polar Coronal Hole Plasmas Observed above the Limb. *G. A. Doschek, U. Feldman, J. M. Laming, U. Schühle, & K. Wilhelm*. 546, 559 (2001)
- FEMENIA, B. Millimetric Ground-based Observation of CMBR Anisotropy at  $\delta = +28^\circ$ . *G. Romeo, S. Ali, B. Femenia, M. Limon, L. Piccirillo, & R. Rebolo*. 548, L1 (2001)
- FERRARESE, LAURA. The  $M_\bullet$ - $\sigma$  Relation for Supermassive Black Holes. *David Merritt & Laura Ferrarese*. 547, 140 (2001)
- FERRIN, IGNACIO. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>. *Ignacio Ferrin, D. Rabinowitz, B. Schaefer, J. Snyder, N. Ellman, B. Vicente, A. Rengstorf, D. Depoy, S. Salim, P. Andrews, C. Bailyn, C. Baltay, C. Briceño, P. Coppi, M. Deng, W. Emmet, A. Oemler, C. Sabbey, J. Shin, S. Sofia, W. van Altena, K. Vivas, C. Abad, A. Bongiovanni, G. Bruzual, G. Della Prugna, D. Herrera, G. Magris, J. Mateu, R. Pacheco, Ge. Sanchez, Gu. Sanchez, H. Schenker, J. Stock, K. Vieira, F. Fuenmayor, J. Hernandez, O. Naranjo, P. Rosenzweig, C. Secco, G. Spavieri, M. Gebhard, K. Honeycutt, S. Mufson, J. Musser, S. Pravdo, E. Helin, & K. Lawrence*. 548, L243 (2001)
- FEY, A. L. The Extreme Scattering Event toward 1741-038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston*. 546, 267 (2001)
- FIEDLER, R. L. The Extreme Scattering Event toward 1741-038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston*. 546, 267 (2001)
- FIGER, D. F. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- FILIPPENKO, ALEXEI V. The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. *Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent*. 546, 205 (2001)
- Monte Carlo Simulations of Type Ia Supernova Observations in Supernova Surveys. *Weidong Li, Alexei V. Filippenko, & Adam G. Riess*. 546, 719 (2001)



- A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu*. 546, 734 (2001)
- See LENTZ, ERIC J., et al. Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- FINOGUENOV, A. *Chandra* Observation of M84, a Radio Lobe Elliptical Galaxy in the Virgo Cluster. *A. Finoguenov & C. Jones*. 547, L107 (2001)
- FIGURE, F. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- FISHER, G. H. The Effects of Rotation on the Evolution of Rising Omega Loops in a Stratified Model Convection Zone. *W. P. Abbott, G. H. Fisher, & Y. Fan*. 546, 1194 (2001)
- FLACCOMIO, E. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- FLETCHER, ANDRÉ B. The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- FONSECA, V. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- FORD, E. Study of the Temporal Behavior of 4U 1728-34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba*. 546, 1107 (2001)
- FORMAN, W. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- FORTI, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- FORTIN, P. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- FOX, D. W. Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748-288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin*. 546, 1055 (2001)
- FOX, DAVID C. Gravitational Lensing by Galaxy Groups in the Hubble Deep Field. *David C. Fox & Ue-Li Pen*. 546, 35 (2001)
- FRAMPTON, PAUL H. Relic Neutrinos and Z-Resonance Mechanism for Highest Energy Cosmic Rays. *James L. Crooks, James O. Dunn, & Paul H. Frampton*. 546, L1 (2001)
- FRANK, ADAM. Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae. *Eric G. Blackman, Adam Frank, & Carl Welch*. 546, 288 (2001)
- FRANSSON, CLAES. See LENTZ, ERIC J., et al. Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- FRANZ, M. See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- FREEDMAN, DEBORAH L. On the Energy of Gamma-Ray Bursts. *Deborah L. Freedman & Eli Waxman*. 547, 922 (2001)
- FREEMAN, P. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- FREY, S. VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . *A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth*. 547, 714 (2001)
- FRIEDLAND, L. Migration Timescale Thresholds for Resonant Capture in the Plutino Problem. *L. Friedland*. 547, L75 (2001)
- FRIEDMANN, YASMIN. A Model of Void Formation. *Yasmin Friedmann & Tsvi Piran*. 548, 1 (2001)
- FRIEMAN, JOSHUA A. The Bispectrum of IRAS Redshift Catalogs. *Roman Scoccimarro, Hume A. Feldman, J. N. Fry, & Joshua A. Frieman*. 546, 652 (2001)
- FROGEL, JAY A. A Method to Measure the Ratio of Total to Selective Extinction toward Baade's Window. *Andrew Gould, Amelia Stutz, & Jay A. Frogel*. 547, 590 (2001)
- FROMERTH, MICHAEL J. A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. *Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy*. 547, L129 (2001)
- FROMMHOLO, LOTHAR. Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. *Magnus Gustafsson & Lothar Frommhold*. 546, 1168 (2001)
- FRONTERA, F. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*. *F. Frontera, E. Palazzi, A. A. Zdziarski, F. Haardt, G. C. Perola, L. Chiappetti, G. Cusumano, D. Dal Fiume, S. Del Sordo, M. Orlandini, A. N. Parmar, L. Piro, A. Santangelo, A. Segreto, A. Treves, & M. Trifoglio*. 546, 1027 (2001)
- FRUCHTER, A. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- FRUCHTER, ANDREW S. The Near-Infrared and Multiwavelength Afterglow of GRB 000301C. *James E. Rhoads & Andrew S. Fruchter*. 546, 117 (2001)
- FRUSCIONE, A. Four Years of Extreme Ultraviolet Observations of Markarian 421. I. Spectral Analysis. *I. Cagnoni & A. Fruscione*. 546, 877 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. *I. Cagnoni, I. E. Papadakis, & A. Fruscione*. 546, 886 (2001)
- See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- FRY, J. N. The Bispectrum of IRAS Redshift Catalogs. *Roman Scoccimarro, Hume A. Feldman, J. N. Fry, & Joshua A. Frieman*. 546, 652 (2001)
- FRYER, CHRIS L. X-Ray Spectral Features from Gamma-Ray Bursts: Predictions of Progenitor Models. *Markus Böttcher & Chris L. Fryer*. 547, 338 (2001)
- FUENMAYOR, F. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- FUENTE, A. Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodriguez-Fernandez, & A. Fuente*. 548, L65 (2001)
- FUJITA, YUTAKA. The Maximum Effect of Thermal Instability on Galactic Outflows. *Yutaka Fujita*. 547, 162 (2001)
- FUJIWARA, HIDEO. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- FUKAZAWA, Y. Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. *A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro*. 547, L119 (2001)
- FUKAZAWA, YASUSHI. Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae*. 546, L87 (2001)
- FUKUYAMA, TAKESHI. Relativistic Effects on Neutrino Pair Annihilation above a Kerr Black Hole with the Accretion Disk. *Katsuaki Asano & Takeshi Fukuyama*. 546, 1019 (2001)
- FULLERTON, A. W. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper*. 548, 889 (2001)
- FUSCO, P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- FUTAMASE, TOSHIFUMI. Detectability of the Gravitational Lensing Effect on the Two-Point Correlation Function of Hot Spots in Cosmic Microwave Background Maps. *Masahiro Takada & Toshifumi Futamase*. 546, 620 (2001)
- GAENSLER, B. M. Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia. *A. M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern*. 547, L41 (2001)
- GAL, R. R. The Butcher-Oemler Effect in 295 Clusters: Strong Redshift Evolution and Cluster Richness Dependence. *V. E. Margoniner, R. R. de Carvalho, R. R. Gal, & S. G. Djorgovski*. 548, L143 (2001)
- GALAMA, T. J. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- GALES, JOEL. Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia*. 547, L155 (2001)

- GALLAGHER, S. C. Heavy X-Ray Absorption in Soft X-Ray–Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyomoto.* 546, 795 (2001)
- GALLI, DANIELE. Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of *r*-Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert.* 547, 217 (2001)
- GALLINO, ROBERTO. Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis.* 546, 248 (2001)
- GAMMIE, CHARLES F. Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models. *Eve C. Ostriker, James M. Stone, & Charles F. Gammie.* 546, 980 (2001)
- GAO, YU. Molecular Gas and the Modest Star Formation Efficiency in the “Antennae” Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee.* 548, 172 (2001)
- GARCIA, BEATRIZ. Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia.* 547, L155 (2001)
- GARCIA, C. E. See SABBEY, C. N., et al. The Low-Redshift Quasar–Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- GARCÍA-GÓMEZ, CARLOS. The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes.* 548, 97 (2001)
- GARDNER, JONATHAN P. Wide-Field Imaging of the Hubble Deep Field–South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate.* 548, 127 (2001)
- GARMIRE, G. P. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L13 (2001)
- See CUI, WEI, et al. Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942.
- GARNAVICH, PETER. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- GARY, S. P. Constraints on the O $\gamma^5$  Anisotropy in the Solar Corona. *L. Ofman, A. Vinñas, & S. P. Gary.* 547, L175 (2001)
- GATES, EVALYN I. A New (Old) Component of the Galaxy as the Origin of the Observed Large Magellanic Cloud Microlensing Events. *Evalyn I. Gates & Geza Gyuk.* 547, 786 (2001)
- GATEWOOD, GEORGE. Preliminary Astrometric Masses for Proposed Extrasolar Planetary Companions. *Inwoo Han, David C. Black, & George Gatewood.* 548, L57 (2001)
- A Combined *Hipparcos* and Multichannel Astrometric Photometer Study of the Proposed Planetary System of  $\rho$  Coronae Borealis. *George Gatewood, Inwoo Han, & David Black.* 548, L61 (2001)
- GATLEY, IAN. Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn.* 546, 279 (2001)
- GAUME, R. A. The Extreme Scattering Event toward 1741–038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston.* 546, 267 (2001)
- GAZTAÑAGA, E. Nonlinear Gravitational Growth of Large-Scale Structures inside and outside Standard Cosmology. *E. Gaztañaga & J. A. Lobo.* 548, 47 (2001)
- GE, JIAN. H $_2$ , C I, Metallicity, and Dust Depletion in the  $z = 2.34$  Damped Ly $\alpha$  Absorption System toward QSO 1232+0815. *Jian Ge, Jill Bechtold, & Varsha P. Kulkarni.* 547, L1 (2001)
- GEHALLE, T. R. Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschildt, & Andreas Schweitzer.* 548, 908 (2001)
- GEBHARD, M. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB $_{173}$ .
- GEORGE, I. M. Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by *Chandra* in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky.* 546, 759 (2001)
- See TURNER, T. J., et al. *Chandra* Grating Spectroscopy of the Seyfert Galaxy Ton S180.
- GEPPERT, ULRICH. Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)
- GERAKINES, P. A. Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface. *D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy.* 547, 872 (2001)
- GERHARD, ORTWIN. The Galactic Center He I Stars: Remains of a Dissolved Young Cluster? *Ortwin Gerhard.* 546, L39 (2001)
- GHAVAMIAN, PARVIZ. Balmer-dominated Spectra of Nonradiative Shocks in the Cygnus Loop, RCW 86, and Tycho Supernova Remnants. *Parviz Ghavamian, John Raymond, R. Chris Smith, & Patrick Hartigan.* 547, 995 (2001)
- GHEZZI, CRISTIAN R. Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. *Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath.* 548, L193 (2001)
- GHIGNA, S. The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake.* 547, 555 (2001)
- GHOSH, KAJAL K. Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey.* 546, L91 (2001)
- GIACOMELLI, G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GIANNINI, G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GIBSON, BRAD K. Supernova 1991T and the Value of the Hubble Constant. *Brad K. Gibson & Peter B. Stetson.* 547, L103 (2001)
- GIES, D. R. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- GIES, DOUGLAS R. Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper.* 548, 889 (2001)
- GIGLIETTO, N. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GILBERT, A. M. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- GIMENEZ DE CASTRO, C. G. Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer.* 548, L95 (2001)
- GIORGINI, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GIOVANELLI, RICCARDO. The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes.* 548, 97 (2001)
- GIRARDI, MARISA. Evolution of the Internal Dynamics of Galaxy Clusters. *Marisa Girardi & Marino Mezzetti.* 548, 79 (2001)
- GLASSGOLD, A. E. Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Mathieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee.* 548, 1051 (2001)
- GLASSGOLD, ALFRED E. The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. *Frank H. Shu, Hsien Shang, Mathieu Gounelle, Alfred E. Glassgold, & Typhoon Lee.* 548, 1029 (2001)
- GÖTTING, N. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- GOLDEN, AARON. Implications of the Optical Observations of Isolated Neutron Stars. *Andy Shearer & Aaron Golden.* 547, 967 (2001)
- GOLDREICH, PETER. Gravity Modes in ZZ Ceti Stars. IV. Amplitude Saturation by Parametric Instability. *Yongqin Wu & Peter Goldreich.* 546, 469 (2001)
- GOLDWURM, A. The SIGMA/Granat Telescope: Calibration and Data Reduction. *L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul.* 548, 990 (2001)

- GÓMEZ DE CASTRO, ANA I. New Constraints on Protostellar Jet Collimation from High-Density Gas UV Tracers. *Ana I. Gómez de Castro & Eva Verdugo*. 548, 976 (2001)
- GONÇALVES, DENISE R. Low-Ionization Structures in Planetary Nebulae: Confronting Models with Observations. *Denise R. Gonçalves, Romano L. M. Corradi, & Antonio Mampaso*. 547, 302 (2001)
- GONG, ZHIGANG. MHD Equation of State with Relativistic Electrons. *Zhigang Gong, Werner Däppen, & Ladislav Zejda*. 546, 1178 (2001)
- GONZÁLEZ, J. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- GONZÁLEZ-CASADO, GUILLERMO. The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes*. 548, 97 (2001)
- GONZÁLEZ DELGADO, ROSA M. The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst-Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer*. 546, 845 (2001)
- GOODE, PHILIP R. A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang*. 547, L85 (2001)
- Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang*. 548, 497 (2001)
- GOODMAN, ALYSSA A. The Effects of Noise and Sampling on the Spectral Correlation Function. *Paolo Padoan, Erik W. Rosolowsky, & Alyssa A. Goodman*. 547, 862 (2001)
- GOORVITCH, D. The Abundances of Solid N<sub>2</sub> and Gaseous CO<sub>2</sub> in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira*. 548, 836 (2001)
- GOPALSWAMY, N. Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret*. 548, L91 (2001)
- GOSS, W. M. Radio Variability of Sagittarius A\*-A 106 Day Cycle. *Jun-Hui Zhao, G. C. Bower, & W. M. Goss*. 547, L29 (2001)
- GOTTHELF, E. V. A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. *J. P. Halpern, E. V. Gotthelf, K. M. Leighly, & D. J. Helfand*. 547, 323 (2001)
- GOTTLIEB, C. A. The Cyclic C<sub>3</sub>H Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus*. 547, L65 (2001)
- GOTTLÖBER, STEFAN. Merging History as a Function of Halo Environment. *Stefan Gottlöber, Anatoly Klypin, & Andrey V. Kravtsov*. 546, 223 (2001)
- GOULD, ANDREW. A Method to Measure the Ratio of Total to Selective Extinction toward Baade's Window. *Andrew Gould, Amelia Stutz, & Jay A. Frogel*. 547, 590 (2001)
- Spatial/Spectral Resolution of a Galactic Bulge K3 Giant Stellar Atmosphere via Gravitational Microlensing. *Sandra Castro, Richard W. Pogge, R. Michael Rich, D. L. DePoy, & Andrew Gould*. 548, L197 (2001)
- GOUNELLE, MATTHIEU. The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. *Frank H. Shu, Hsien Shang, Matthieu Gounelle, Alfred E. Glassgold, & Typhoon Lee*. 548, 1029 (2001)
- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Matthieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee*. 548, 1051 (2001)
- GOVERNATO, F. The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake*. 547, 555 (2001)
- GOVERNATO, FABIO. Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake*. 547, L123 (2001)
- GRAESSLE, D. E. See KAARET, P., et al. *Chandra* Observations of the Young Pulsar PSR B0540-69.
- GRAHAM, J. R. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- GRASSI, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GRAY, L. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GRAY, ROBERT H. A VLA Search for the Ohio State "Wow." *Robert H. Gray & Kevin B. Marvel*. 546, 1171 (2001)
- GRAEVES, J. S. Measurement of the Magnetic Field Direction in the NGC 2024 FIR 5 Protostellar Outflow. *J. S. Greaves, W. S. Holland, & D. Ward-Thompson*. 546, L53 (2001)
- GREBEL, EVA K. A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel*. 547, 754 (2001)
- See ODKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- GRECHNEV, V. V. Spatial Structure of Simple Spiky Bursts at Microwave/Millimeter Wavelengths. *M. R. Kundu, S. M. White, K. Shibasaki, T. Sakurai, & V. V. Grechnev*. 547, 1090 (2001)
- GREEN, P. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- GREENHILL, LINCOLN J. A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne*. 546, L25 (2001)
- GREGG, MICHAEL D. QSO 2359-1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack*. 546, 134 (2001)
- The Intrinsic Absorber in QSO 2359-1241: *KECK and Hubble Space Telescope* Observations. *Nahum Arav, Michael S. Brotherton, Robert H. Becker, Michael D. Gregg, Richard L. White, Trevor Price, & Warren Hack*. 546, 140 (2001)
- Composite Spectra from the FIRST Bright Quasar Survey. *M. S. Brotherton, Hien D. Tran, R. H. Becker, Michael D. Gregg, S. A. Laurent-Muehleisen, & R. L. White*. 546, 775 (2001)
- KECK HIRES Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. *Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista*. 548, 609 (2001)
- Substructure and Dynamics of the Fornax Cluster. *Michael J. Drinkwater, Michael D. Gregg, & Matthew Colless*. 548, L139 (2001)
- GREGORICH, D. T. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- GRILLO, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GRINDLAY, J. E. ASCA Observations of GX 354-0 and KS 1731-260. *T. Narita, J. E. Grindlay, & D. Barret*. 547, 420 (2001)
- GRINDLAY, JONATHAN E. Stellar Variability in the Metal-rich, Obscured Globular Cluster Terzan 5. *Peter D. Edmonds, Jonathan E. Grindlay, Haldan Cohn, & Phyllis Lugger*. 547, 829 (2001)
- GRUBER, DUANE E. High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Tails in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber*. 547, L147 (2001)
- GRUENDL, ROBERT A. A Search for Jovian Planets around Hot White Dwarfs. *You-Hua Chu, Bryan C. Dunne, & Robert A. Gruendl*. 546, L61 (2001)
- GUARINO, F. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GUÉLIN, MICHEL. *Infrared Space Observatory's* Discovery of C<sub>4</sub>H<sub>2</sub>, C<sub>6</sub>H<sub>2</sub>, and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters*. 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters*. 546, L127 (2001)
- GUINAN, EDWARD F. The Best Brown Dwarf Yet? A Companion to the Hyades Eclipsing Binary V471 Tauri. *Edward F. Guinan & Ignasi Ribas*. 546, L43 (2001)
- GUNDERSEN, J. O. A Limit on the Polarized Anisotropy of the Cosmic Microwave Background at Subdegree Angular Scales. *M. M. Hedman, D. Barkats, J. O. Gundersen, S. T. Staggs, & B. Winstein*. 548, L111 (2001)
- GURVITS, L. I. VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . *A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth*. 547, 714 (2001)



- GUSTAFSSON, MAGNUS. Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. *Magnus Gustafsson & Lothar Frommhold*. 546, 1168 (2001)
- GUSTAVINO, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- GYUK, GEZA. A New (Old) Component of the Galaxy as the Origin of the Observed Large Magellanic Cloud Microlensing Events. *Evelyn I. Gates & Geza Gyuk*. 547, 786 (2001)
- HAARDT, F. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- HABIG, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- HACK, WARREN. QSO 2359–1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack*. 546, 134 (2001)
- The Intrinsic Absorber in QSO 2359–1241: KECK and *Hubble Space Telescope* Observations. *Nahum Arav, Michael S. Brotherton, Robert H. Becker, Michael D. Gregg, Richard L. White, Trevor Price, & Warren Hack*. 546, 140 (2001)
- HAFFNER, L. M. Detection of N II  $\lambda$ 5755 Emission from Low-Density Ionized Interstellar Gas. *R. J. Reynolds, N. C. Sterling, L. M. Haffner, & S. L. Tufte*. 548, L221 (2001)
- HAILEY, CHARLES J. The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch*. 548, 550 (2001)
- HAIMAN, ZOLTÁN. Constraining the Lifetime of Quasars from Their Spatial Clustering. *Zoltán Haiman & Lam Hui*. 547, 27 (2001)
- HAKALA, PASI. Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi. *Pablo Rodriguez-Gil, Jorge Casares, Ignacio G. Martinez-Pais, Pasi Hakala, & Danny Steeghs*. 548, L49 (2001)
- HALL, P. B. See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- HALPERN, J. P. A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. *J. P. Halpern, E. V. Gotthelf, K. M. Leighty, & D. J. Helfand*. 547, 323 (2001)
- A Neutron Star Identification for the High-Energy Gamma-Ray Source 3EG J1835+5918 Detected in the ROSAT All-Sky Survey. *N. Mirabel & J. P. Halpern*. 547, L137 (2001)
- HAMEED, SALMAN. The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux*. 546, L97 (2001)
- HAN, CHEONGHO. Comparison of the Two Follow-up Observation Strategies for Gravitational Microlensing Planet Searches. *Cheongho Han & Yong-Gi Kim*. 546, 975 (2001)
- HAN, INWOO. Preliminary Astrometric Masses for Proposed Extrasolar Planetary Companions. *Inwoo Han, David C. Black, & George Gatewood*. 548, L57 (2001)
- A Combined *Hipparcos* and Multichannel Astrometric Photometer Study of the Proposed Planetary System of  $\rho$  Coronae Borealis. *George Gatewood, Inwoo Han, & David Black*. 548, L61 (2001)
- HANDLER, G. Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from *RXTE* Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler*. 548, L41 (2001)
- HANDY, BRIAN N. On the Evolution of the Solar Photospheric and Coronal Magnetic Field. *Brian N. Handy & Carolus J. Schrijver*. 547, 1100 (2001)
- HANKINS, T. H. Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia A. *M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern*. 547, L41 (2001)
- HANNA, D. S. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- HANSON, K. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- HANSTEEN, V. H. See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- HARDING, ALICE K. Photon Splitting and Pair Creation in Highly Magnetized Pulsars. *Matthew G. Baring & Alice K. Harding*. 547, 929 (2001)
- Off-Beam Gamma-Ray Pulsars and Unidentified Egret Sources in the Gould Belt. *Alice K. Harding & Bing Zhang*. 548, L37 (2001)
- HARNDEN, F. R., JR. *Chandra* Observations of the Open Cluster NGC 2516. *F. R. Harnden, Jr., N. R. Adams, F. Damiani, J. J. Drake, N. R. Evans, F. Favata, E. Flaccomio, P. Freeman, R. D. Jeffries, V. Kashyap, G. Micela, B. M. Patten, N. Pizzolato, J. F. Schachter, S. Sciortino, J. Stauffer, S. J. Wolk, & M. V. Zombeck*. 547, L141 (2001)
- HARRIS, D. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- HARTIGAN, PATRICK. Balmer-dominated Spectra of Nonradiative Shocks in the Cygnus Loop, RCW 86, and Tycho Supernova Remnants. *Parviz Ghavamian, John Raymond, R. Chris Smith, & Patrick Hartigan*. 547, 995 (2001)
- HARTMANN, DAP. The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus*. 547, 792 (2001)
- HARTMANN, LEE. Infall Models of Class 0 Protostars. *Ray Jayawardhana, Lee Hartmann, & Nuria Calvet*. 548, 310 (2001)
- HARVIN, J. A. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- HARVIN, JAMES A. Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper*. 548, 889 (2001)
- HATZIMINOAGLOU, EVANTHIA. Accretion Disk Instabilities, Cold Dark Matter Models, and Their Role in Quasar Evolution. *Evantia Hatziminaoglou, Aneta Siemiginowska, & Martin Elvis*. 547, 90 (2001)
- HAUSCHILD, P. H. Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschild, & Andreas Schweitzer*. 548, 908 (2001)
- HAUSCHILD, PETER H. SN 1984A and Delayed-Detonation Models of Type Ia Supernovae. *Eric J. Lentz, E. Baron, David Branch, & Peter H. Hauschild*. 547, 402 (2001)
- See LENTZ, ERIC J., et al. Analysis of the Type IIIn SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschild, S. Starrfield, & E. Baron*. 547, 1057 (2001)
- HAWLEY, JOHN F. Global MHD Simulation of the Inner Accretion Disk in a Pseudo-Newtonian Potential. *John F. Hawley & Julian H. Krolik*. 548, 348 (2001)
- HAYES, A. P. Deriving the Electron Density of the Solar Corona from the Inversion of Total Brightness Measurements. *A. P. Hayes, A. Vourlidas, & R. A. Howard*. 548, 1081 (2001)
- HAYNES, MARTHA P. The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes*. 548, 97 (2001)
- HECKMAN, TIMOTHY. The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst-Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer*. 546, 845 (2001)
- HEDMAN, M. M. A Limit on the Polarized Anisotropy of the Cosmic Microwave Background at Subdegree Angular Scales. *M. M. Hedman, D. Barkats, J. O. Gundersen, S. T. Staggs, & B. Winstein*. 548, L111 (2001)
- HEINDL, WILLIAM A. High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Tails in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber*. 547, L147 (2001)
- HEINZ, R. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- HEINZELMANN, G. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- HEITSCH, FABIAN. Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence. *Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen*. 547, 280 (2001)
- HELFAND, D. J. A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. *J. P. Halpern, E. V. Gotthelf, K. M. Leighty, & D. J. Helfand*. 547, 323 (2001)
- HELIN, E. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- HELOU, GEORGE. Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Helou, Sangeeta Malhotra,*

- David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi. 548, L73 (2001)
- HENN, LEEANN. Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn. 546, 279 (2001)
- HENNESSY, G. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- HENNEY, W. J. Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). L. López-Martín, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto. 548, 288 (2001)
- HENNING, THOMAS. Three-dimensional Simulations of a Planet Embedded in a Protoplanetary Disk. Wilhelm Kley, Gennaro D'Angelo, & Thomas Henning. 547, 457 (2001)
- HERALD, J. E. Tailored Analyses of the WN 8 Stars WR 40 and WR 16. J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck. 548, 932 (2001)
- HERAS, ANA M. Infrared Space Observatory's Discovery of  $C_4H_2$ ,  $C_6H_2$ , and Benzene in CRL 618. José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters. 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618. José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters. 546, L127 (2001)
- HERMANN, G. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- HERNANDEZ, J. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- HERNUST, LARS. First Structure Formation: A Simulation of Small-Scale Structure at High Redshift. Hannah Jang-Condell & Lars Hernquist. 548, 68 (2001)
- HERNUST, LARS E. The Central X-Ray Point Source in Cassiopeia A. Deepito Chakrabarty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan. 548, 800 (2001)
- HERPIN, FABRICE. Infrared Space Observatory's Discovery of  $C_4H_2$ ,  $C_6H_2$ , and Benzene in CRL 618. José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters. 546, L123 (2001)
- HERRERA, D. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- HERRNSTEIN, JAMES R. A Binary Millisecond Pulsar in Globular Cluster NGC 6544. Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne. 546, L25 (2001)
- HESSMAN, F. V. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- HEUSLER, A. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- HEYL, JEREMY S. The Central X-Ray Point Source in Cassiopeia A. Deepito Chakrabarty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan. 548, 800 (2001)
- HIBSCHMAN, JOHANN A. Polarization Sweeps in Rotation-powered Pulsars. Johann A. Hirschman & Jonathan Arons. 546, 382 (2001)
- HILL, ROBERT S. Wide-Field Imaging of the Hubble Deep Field-South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate. 548, 127 (2001)
- HILLENBRAND, LYNNE A. Periodic Photometric Variability in the Becklin-Neugebauer Object. Lynne A. Hillenbrand, John M. Carpenter, & M. F. Skrutskie. 547, L53 (2001)
- HILLIER, D. J. Tailored Analyses of the WN 8 Stars WR 40 and WR 16. J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck. 548, 932 (2001)
- HILLIER, D. JOHN. Physical Parameters of Erupting Luminous Blue Variables: NGC 2363—V1 Caught in the Act. Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier. 546, 484 (2001)
- HINDSLEY, ROBERT B. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- HIRANO, NAOMI. SiO Emission in the Multilobe Outflow Associated with IRAS 16293—2422. Naomi Hirano, Hitomi Mikami, Tomofumi Uemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi. 547, 899 (2001)
- Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe. 548, 278 (2001)
- HIROTA, TOMOYA. Observations of DNC and HN<sup>13</sup>C in Dark Cloud Cores. Tomoya Hirota, Masafumi Ikeda, & Satoshi Yamamoto. 547, 814 (2001)
- HJORTH, J. See JAUNSEN, A. O., et al. The Jet and Circumburst Stellar Wind of GRB 980519.
- HO, LUIS C. The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent. 546, 205 (2001)
- HO, P. T. P. A Radio Telescope Search for Axions. B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu. 546, 825 (2001)
- HODGE, PAUL W. WFC2 Observations of Massive and Compact Young Star Clusters in M31. Benjamin F. Williams & Paul W. Hodge. 548, 190 (2001)
- HOEKSTRA, H. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ . H. Hoekstra, M. Franz, K. Kuijken, R. G. Carlberg, H. K. C. Yee, H. Lin, S. L. Morris, P. B. Hall, D. R. Patton, M. Sawicki, & G. D. Wirth. 548, L5 (2001)
- HOFFMAN, WILLIAM F. Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman. 548, 1020 (2001)
- HOFMANN, W. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- HOGAN, ROBERT C. Size-selective Concentration of Chondrules and Other Small Particles in Protoplanetary Nebula Turbulence. Jeffrey N. Cuzzi, Robert C. Hogan, Julie M. Paque, & Anthony R. Dobrovolskis. 546, 496 (2001)
- HOLAND, W. S. Measurement of the Magnetic Field Direction in the NGC 2024 FIR 5 Protostellar Outflow. J. S. Greaves, W. S. Holland, & D. Ward-Thompson. 546, L53 (2001)
- HOLLENBACH, DAVID J. Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. George Helou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi. 548, L73 (2001)
- HOLMLID, LEIF. Observation of the Unidentified Infrared Bands in the Laboratory: Anti-Stokes Stimulated Raman Spectroscopy of a Rydberg Matter Surface Boundary Layer. Leif Holmlid. 548, L249 (2001)
- HONEYCUTT, K. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- HONMA, M. Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin. 547, L115 (2001)
- HOOPER, E. J. See CAPPI, M., et al. Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- HORA, JOSEPH L. Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman. 548, 1020 (2001)
- HORNER, D. Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner. 548, L23 (2001)
- HORNS, D. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- HORVATH, JORGE E. Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath. 548, L193 (2001)
- HOUE, MARTIN. The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida. 547, 311 (2001)
- HOUGH, J. H. Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface.

- D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy. 547, 872 (2001)
- HOWARD, R. A. Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret*. 548, L91 (2001)
- Deriving the Electron Density of the Solar Corona from the Inversion of Total Brightness Measurements. *A. P. Hayes, A. Vourlidas, & R. A. Howard*. 548, 1081 (2001)
- HOWK, J. CHRISTOPHER. STIS and GHRS Observations of Warm and Hot Gas Overlying the Stutum Supershell (GS 018–04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk*. 547, 907 (2001)
- HSIEH, HENRY H. See OJHA, ROOPESH, et al. AST/RO Observations of Atomic Carbon near the Galactic Center.
- HU, JINGYAO. A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu*. 546, 734 (2001)
- HU, WAYNE. Weak Gravitational Lensing Bispectrum. *Asantha Cooray & Wayne Hu*. 548, 7 (2001)
- HUANG, G. L. Exact Solutions for Two-dimensional Steady Magnetic Reconnection in Partially Ionized Plasmas. *H. S. Ji, M. T. Song, & G. L. Huang*. 548, 1087 (2001)
- HUANG, W. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- HUENEMOERDER, DAVID P. Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin*. 548, L81 (2001)
- HUGHES, JOHN P. Two New Ejecta-dominated Galactic Supernova Remnants: G337.2–0.7 and G309.2–0.6. *Cara E. Rakowski, John P. Hughes, & Patrick Slane*. 548, 258 (2001)
- RJX 0852.0–0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2–1.2). *Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach*. 548, 814 (2001)
- HUI, LAM. How Many Galaxies Fit in a Halo? Constraints on Galaxy Formation Efficiency from Spatial Clustering. *Román Scoccimarro, Ravi K. Sheth, Lam Hui, & Bhuvnesh Jain*. 546, 20 (2001)
- Constraining the Lifetime of Quasars from Their Spatial Clustering. *Zoltán Haiman & Lam Hui*. 547, 27 (2001)
- HURLBURT, N. E. Magnetic Diffusion in Stratified Atmospheres. *E. E. DeLuca & N. E. Hurlburt*. 548, 1093 (2001)
- HURT, TODD. Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad*. 547, 667 (2001)
- HUT, PIET. How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut*. 546, L101 (2001)
- IARIA, R. A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba*. 547, 412 (2001)
- A Hard Tail in the Broadband Spectrum of the Dipper XB 1254–690. *R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba*. 548, 883 (2001)
- IAROCCHI, E. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- IBARRA, A. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- IBATA, RODRIGO. Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte*. 547, L133 (2001)
- See ODKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- IGNACE, R. The Hanle Effect as a Diagnostic of Magnetic Fields in Stellar Envelopes. III. Including the Finite Star Depolarization Effect. *R. Ignace*. 547, 393 (2001)
- IKEDA, MASAFUMI. Observations of DNC and HN<sup>13</sup>C in Dark Cloud Cores. *Tomoya Hirota, Masafumi Ikeda, & Satoshi Yamamoto*. 547, 814 (2001)
- See YAMAMOTO, SATOSHI, et al. Observation of the C i <sup>3</sup>P<sub>2</sub>–<sup>3</sup>P<sub>1</sub> Line toward the Orion Kleinmann-Low Region.
- ILIEV, ILIAN T. On the Origin of the Rotation Curves of Dark Matter-dominated Galaxies. *Ilian T. Iliev & Paul R. Shapiro*. 546, L5 (2001)
- IMPEY, C. D. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- IMPEY, CHRIS. Radio-quiet Quasars in the Direction of the Northern Hubble Deep Field. *Chris Impey & Cathy Petry*. 547, 117 (2001)
- INATANI, JUNII. See YAMAMOTO, SATOSHI, et al. Observation of the C i <sup>3</sup>P<sub>2</sub>–<sup>3</sup>P<sub>1</sub> Line toward the Orion Kleinmann-Low Region.
- INOUE, K. Clear Evidence of Reconnection Inflow of a Solar Flare. *T. Yokoyama, K. Akita, T. Morimoto, K. Inoue, & J. Newmark*. 546, L69 (2001)
- IRWIN, JIMMY A. Iron Abundance Profiles of 12 Clusters of Galaxies Observed with BeppoSAX. *Jimmy A. Irwin & Joel N. Bregman*. 546, 150 (2001)
- IRWIN, JUDITH A. Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin*. 547, L115 (2001)
- IRWIN, MICHAEL. Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte*. 547, L133 (2001)
- ISEROLO, C. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- ISHIBASHI, K. The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre*. 547, 1034 (2001)
- ISOBE, N. X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). *M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda*. 546, L19 (2001)
- ISOBE, NAOKI. Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae*. 546, L87 (2001)
- ITO, TETSUYA. See YAMAMOTO, SATOSHI, et al. Observation of the C i <sup>3</sup>P<sub>2</sub>–<sup>3</sup>P<sub>1</sub> Line toward the Orion Kleinmann-Low Region.
- IVEŽIĆ, ŽELJKO. See ODKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- IWAMOTO, KOICHI. Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto*. 547, 988 (2001)
- IWATA, MITSUHIRO. See YAMAMOTO, SATOSHI, et al. Observation of the C i <sup>3</sup>P<sub>2</sub>–<sup>3</sup>P<sub>1</sub> Line toward the Orion Kleinmann-Low Region.
- IYOMOTO, N. X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). *M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda*. 546, L19 (2001)
- Heavy X-Ray Absorption in Soft X-Ray-Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyomoto*. 546, 795 (2001)
- JACKSON, JAMES M. See OJHA, ROOPESH, et al. AST/RO Observations of Atomic Carbon near the Galactic Center.
- JAIN, BHUVNESH. How Many Galaxies Fit in a Halo? Constraints on Galaxy Formation Efficiency from Spatial Clustering. *Román Scoccimarro, Ravi K. Sheth, Lam Hui, & Bhuvnesh Jain*. 546, 20 (2001)
- JAIN, RAJ K. Optical Observations of the Black Hole Candidate XTE J1550–564 during Reflare and Quiescence. *Raj K. Jain, Charles D. Bailyn, Jerome A. Orosz, Jeffrey E. McClintock, Gregory J. Sobczak, & Ronald A. Remillard*. 546, 1086 (2001)
- JANG-CONDELL, HANNAH. First Structure Formation: A Simulation of Small-Scale Structure at High Redshift. *Hannah Jang-Condell & Lars Hernquist*. 548, 68 (2001)
- JAQ, W. C. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- JARRETT, T. H. Near-Infrared Imaging and O i Spectroscopy of IC 443 Using 2MASS and Infrared Space Observatory. *Jeonghee Rho, T. H. Jarrett, R. M. Cutri, & W. T. Reach*. 547, 885 (2001)



- JAUENSEN, A. O. The Jet and Circumburst Stellar Wind of GRB 980519. *A. O. Jaunsen, J. Hjorth, G. Björnsson, M. I. Andersen, H. Pedersen, K. Kjærsmo, H. Korhonen, P. M. Sørensen, & E. Palazzi.* 546, 127 (2001)
- JAYAWARDHANA, RAY. Infall Models of Class 0 Protostars. *Ray Jayawardhana, Lee Hartmann, & Nuria Calvet.* 548, 310 (2001)
- JEFFRIES, R. D. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- JENET, F. A. Single-Pulse Characteristics of the Millisecond Radio Pulsar PSR B1937+21 at 430 MHz. *F. A. Jenet, S. B. Anderson, & T. A. Prince.* 546, 394 (2001)
- JENKINS, EDWARD B. Where Are the Absorbers toward Q2302+029? *David V. Bowen, Raul Jimenez, Edward B. Jenkins, & Max Pettini.* 547, 39 (2001)
- JESSNER, AXEL. Charge Densities above Pulsar Polar Caps. *Axel Jessner, Harald Lesch, & Thomas Kunz.* 547, 959 (2001)
- JHA, S. See LENTZ, ERIC J., et al. Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- Ji, H. S. Exact Solutions for Two-dimensional Steady Magnetic Reconnection in Partially Ionized Plasmas. *H. S. Ji, M. T. Song, & G. L. Huang.* 548, 1087 (2001)
- JIMENEZ, RAUL. Where Are the Absorbers toward Q2302+029? *David V. Bowen, Raul Jimenez, Edward B. Jenkins, & Max Pettini.* 547, 39 (2001)
- JING, Y. P. Scaling Properties of the Redshift Power Spectrum: Theoretical Models. *Y. P. Jing & G. Börner.* 547, 545 (2001)
- JOHNSTON, K. J. The Extreme Scattering Event toward 1741—038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston.* 546, 267 (2001)
- JONES, C. *Chandra* Observation of M84, a Radio Lobe Elliptical Galaxy in the Virgo Cluster. *A. Finoguenov & C. Jones.* 547, L107 (2001)
- See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- JONES, FRANK C. The Modified Weighted Slab Technique: Models and Results. *Frank C. Jones, Andrew Lukasiak, Vladimir Ptuskin, & William Webber.* 547, 264 (2001)
- JONES, L. R. Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner.* 548, L23 (2001)
- JOSEPHS, T. S. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- JOUNG, M. K. Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with Infrared Space Observatory LWS Observations. *E. I. Chiang, M. K. Jung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)
- JUDGE, P. G. See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- JUNG, I. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- JUSZKIEWICZ, ROMAN. A Simple Method for Computing the Nonlinear Mass Correlation Function with Implications for Stable Clustering. *Robert R. Caldwell, Roman Juszkiewicz, Paul J. Steinhardt, & Francois R. Bouchet.* 547, L93 (2001)
- KAARET, P. *Chandra* Observations of the Young Pulsar PSR B0540—69. *P. Kaaret, H. L. Marshall, T. L. Aldcroft, D. E. Graessle, M. Karovska, S. S. Murray, A. H. Rots, N. S. Schulz, & F. D. Seward.* 546, 1159 (2001)
- KAARET, PHILIP. The X-Ray Properties of Low-Frequency Quasi-periodic Oscillations from GRS 1915+105 up to 120 keV. *John A. Tomsick & Philip Kaaret.* 548, 401 (2001)
- KAastra, J. S. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091.
- See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- KAHN, STEVEN M. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091.
- The *Chandra* Iron L X-Ray Line Spectrum of Capella. *Ehud Behar, Jean Cottam, & Steven M. Kahn.* 548, 966 (2001)
- KAISER, M. L. Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret.* 548, L91 (2001)
- KAISER, R. I. The Formation of  $C_5H_5$  Isomers as Potential Key Intermediates to Polycyclic Aromatic Hydrocarbon-like Molecules. *R. I. Kaiser, H. Y. Lee, A. M. Mebel, & Y. T. Lee.* 548, 852 (2001)
- KAJINO, T. Production of  $^2H$ ,  $^3He$ , and  $^7Li$  from Interactions between Jets and Clouds. *M. Famiano, J. Vandeagriff, R. N. Boyd, T. Kajino, & P. Osmer.* 547, L21 (2001)
- KAJINO, TOSHITAKA. Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? *Sean G. Ryan, Timothy C. Beers, Toshitaka Kajino, & Katarina Rosolankova.* 547, 231 (2001)
- KALLMAN, TIMOTHY R. Accretion Disk Models and Their X-Ray Reflection Signatures. I. Local Spectra. *Sergei Nayakshin & Timothy R. Kallman.* 546, 406 (2001)
- KAMAE, TSUNEYOSHI. Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae.* 546, L87 (2001)
- KAMAZAKI, TAKESHI. Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe.* 548, 278 (2001)
- KAMEGAI, KAZUHIKA. See YAMAMOTO, SATOSHI, et al. Observation of the  $C\ 1\ ^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- KANEDA, H. X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). *M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda.* 546, L19 (2001)
- KANKANYAN, R. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KAPER, L. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper.* 548, 889 (2001)
- KAROVSKA, M. See KAARET, P., et al. *Chandra* Observations of the Young Pulsar PSR B0540—69.
- KASHYAP, V. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- KASHYAP, VINAY. The Coronal Metallicity of the Intermediate Activity Dwarf  $\xi$  Bootis A. *Jeremy J. Drake & Vinay Kashyap.* 547, 428 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin.* 548, L81 (2001)
- KASHYAP, VINAY L. Analysis of Energy Spectra with Low Photon Counts via Bayesian Posterior Simulation. *David A. van Dyk, Alanna Connors, Vinay L. Kashyap, & Aneta Siemiginowska.* 548, 224 (2001)
- KASPI, S. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L9 (2001)
- KASPI, SHAI. High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L13 (2001)
- KASPI, V. M. Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia A. *M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern.* 547, L41 (2001)
- See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- KASTNER, JOEL H. Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn.* 546, 279 (2001)
- KASTURIRANGAN, K. Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. *S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan.* 546, 1075 (2001)
- Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan.* 548, 368 (2001)
- KATHIRAVAN, C. Low-Frequency Radio Observations of the Angular Broadening of the Crab Nebula Due to a Coronal Mass Ejection. *R. Ramesh, C. Kathiravan, & Ch. V. Sastry.* 548, L229 (2001)

- KATSAVOUNIDIS, E. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- KATSAVOUNIDIS, I. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- KAUFER, A. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- KAUFMANN, PIERRE. Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer*. 548, L95 (2001)
- KAWABE, R. Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the *Chandra* High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe*. 547, L25 (2001)
- An  $\text{H}^{13}\text{CO}^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada*. 547, 840 (2001)
- KAWABE, RYUHEI. Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe*. 548, 278 (2001)
- KAWAGUCHI, N. VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . *A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth*. 547, 714 (2001)
- KAWAGUCHI, TOSHIHIRO. Broadband Spectral Energy Distributions of Active Galactic Nuclei from an Accretion Disk with Advective Coronal Flow. *Toshihiro Kawaguchi, Toshiya Shimura, & Shin Mineshige*. 546, 966 (2001)
- KAWAI, N. Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the *Chandra* High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe*. 547, L25 (2001)
- KAWAMURA, A. Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin*. 547, L115 (2001)
- KAWATA, DAISUKE. The Role of Clustering of Subclumps in Bright Elliptical Galaxy Formation from a Low-Spin Seed Galaxy. *Daisuke Kawata*. 548, 703 (2001)
- KAZANAS, DEMOSTHENES. Exact Expressions for the Critical Mach Numbers in the Two-Fluid Model of Cosmic-Ray-modified Shocks. *Peter A. Becker & Demosthenes Kazanas*. 546, 429 (2001)
- KEARNS, E. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- KEETON, C. R. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- The Importance of Einstein Rings. *C. S. Kochanek, C. R. Keeton, & B. A. McLeod*. 547, 50 (2001)
- KELLOGG, E. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- KELLOGG, JAMES R. *Hubble Space Telescope* Proper-Motion Measurements of the  $\eta$  Carinae Nebula. *Jon A. Morse, James R. Kellogg, John Bally, Kris Davidson, Bruce Balick, & Dennis Ebbets*. 548, L207 (2001)
- KEMPNER, JOSHUA C. Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey. *Joshua C. Kempner & Craig L. Sarazin*. 548, 639 (2001)
- KENNICUTT, ROBERT C., JR. Editorial: New Subjects for a New Millennium. *Robert C. Kennicutt, Jr.* 546, 1 (2001)
- Astrophysical Journal* Subject Headings. *Robert C. Kennicutt, Jr.* 546, 605 (2001)
- A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and  $\text{H}\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)
- KENYON, SCOTT J. The Kuiper Belt and Olbers's Paradox. *Scott J. Kenyon & Rogier A. Windhorst*. 547, L69 (2001)
- KERN, J. S. Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia A. *M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern*. 547, L41 (2001)
- KERR, THOMAS. A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr*. 547, L161 (2001)
- KESSLER, J. E. Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Joun, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck*. 547, 1077 (2001)
- KESTEL, M. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KETTLER, J. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KIM, CHULHEE. Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey*. 546, L91 (2001)
- KIM, CHUNGLEE. Effects of Luminosity Functions Induced by Relativistic Beaming on the Statistics of Cosmological Gamma-Ray Bursts. *Chunglee Kim, Heon-Young Chang, & Insu Yi*. 548, 532 (2001)
- KIM, H. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- KIM, JUNG-HOON. A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang*. 547, L85 (2001)
- KIM, JUNGHON. Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spiro, & Haimin Wang*. 548, 497 (2001)
- KIM, MYUNG GYON. New Evidence for the Unified Scheme of BL Lacertae Objects and FR I Radio Galaxies. *J. M. Bai & Myung Gyon Kim*. 548, 244 (2001)
- KIM, SUNGEUN. A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungeun Kim, & Lister Staveley-Smith*. 548, 749 (2001)
- KIM, YONG-GI. Comparison of the Two Follow-up Observation Strategies for Gravitational Microlensing Planet Searches. *Cheongho Han & Yong-Gi Kim*. 546, 975 (2001)
- KIRK, J. G. Reconnection in a Striped Pulsar Wind. *Y. Lyubarsky & J. G. Kirk*. 547, 437 (2001)
- KIRSHNER, R. P. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- KISHIMOTO, MAKOTO. Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad*. 547, 667 (2001)
- KITAMURA, Y. An  $\text{H}^{13}\text{CO}^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada*. 547, 840 (2001)
- KJERNESMO, K. See JAUNSEN, A. O., et al. The Jet and Circumburst Stellar Wind of GRB 980519.
- KLESSEN, RALF S. Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence. *Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen*. 547, 280 (2001)
- KLEY, WILHELM. Three-dimensional Simulations of a Planet Embedded in a Protoplanetary Disk. *Wilhelm Kley, Gennaro D'Angelo, & Thomas Henning*. 547, 457 (2001)
- KLYPIN, ANATOLY. Merging History as a Function of Halo Environment. *Stefan Gottlöber, Anatoly Klypin, & Andrey V. Kravtsov*. 546, 223 (2001)
- KNEE, LEWIS B. G. NGC 1333—Protostars, Dust Shells, and Triggered Star Formation. *Göran Sandell & Lewis B. G. Knee*. 546, L49 (2001)
- KNUDSON, T. N. Coronal Inflows and the Sun's Nonaxisymmetric Open Flux. *N. R. Sheeley, Jr., T. N. Knudson, & Y.-M. Wang*. 546, L131 (2001)
- KOCHANKEK, C. S. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- The Importance of Einstein Rings. *C. S. Kochanek, C. R. Keeton, & B. A. McLeod*. 547, 50 (2001)
- An Efficient Search for Gravitationally Lensed Radio Lobes. *J. Lehar, A. Buchalter, R. G. McMahon, C. S. Kochanek, & T. W. B. Muxlow*. 547, 60 (2001)
- KODA, J. Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin*. 547, L115 (2001)
- KODAMA, TADAYUKI. A Rich Cluster of Galaxies near the Quasar B2 1335+28 at  $z = 1.1$ : Color Distribution and Star Formation Properties. *Erratum. Ichi Tanaka, Toru Yamada, Alfonso Aragón-Salamanca, Tadayuki Kodama,*

- Takamitsu Miyaji, Kouji Ohta, & Nobuo Arimoto. 546, 604 (2001) (Orig. paper in 528, 123 (2000))
- KOERNER, D. W. Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler. 548, 861 (2001)
- KOGUT, A. Statistical Power, the Bispectrum, and the Search for Non-Gaussianity in the Cosmic Microwave Background Anisotropy. Nicholas G. Phillips & A. Kogut. 548, 540 (2001)
- KOHNLE, A. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KOHNO, K. Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin. 547, L115 (2001)
- KONDRATYEV, V. N. Magnetic Field Effect on Masses of Atomic Nuclei. V. N. Kondratyev, Toshiaki Maruyama, & Satoshi Chiba. 546, 1137 (2001)
- KONOPELKO, A. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KONZ, C. The Critical Velocity Effect as a Cause for the H $\alpha$  Emission from the Magellanic Stream. C. Konz, H. Lesch, G. T. Birk, & H. Wiechen. 548, 249 (2001)
- KORHONEN, H. See JAUNSEN, A. O., et al. The Jet and Circumburst Stellar Wind of GRB 980519.
- KORISTA, KIRK T. Keck HIRES Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista. 548, 609 (2001)
- KORNMEYER, H. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KORPELA, ERIC. Extreme-Ultraviolet Emission in the Fornax Cluster of Galaxies. Stuart Bowyer, Eric Korpela, & Thomas Berghöfer. 548, L135 (2001)
- KORZENNIK, S. G. Energy Distribution of Solar Oscillation Modes Inferred from Space-based Measurements. M. F. Woodard, S. G. Korzennik, M. C. Rabello-Soares, P. Kumar, T. D. Tarbell, & S. Action. 548, L103 (2001)
- KOTILAINEN, JARI. Near-Infrared Imaging of the Host Galaxies of Three Radio-loud Quasars at  $z \sim 1.5$ . Renato Falomo, Jari Kotilainen, & Aldo Treves. 547, 124 (2001)
- KOTOKU, J. Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro. 547, L119 (2001)
- KOUVELIOTOU, C. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748–288. J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin. 546, 1055 (2001)
- KOYAMA, K. Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the Chandra High-Resolution Camera. H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe. 547, L25 (2001)
- KRAEMER, S. See TURNER, T. J., et al. Chandra Grating Spectroscopy of the Seyfert Galaxy Ton S180.
- KRANICH, D. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KRAVTSOV, ANDREY V. Merging History as a Function of Halo Environment. Stefan Gottlöber, Anatoly Klipin, & Andrey V. Kravtsov. 546, 223 (2001)
- Hierarchical Galaxy Formation and Substructure in the Galaxy's Stellar Halo. James S. Bullock, Andrey V. Kravtsov, & David H. Weinberg. 548, 33 (2001)
- KRAWCZYNSKI, H. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- KRISS, G. See TURNER, T. J., et al. Chandra Grating Spectroscopy of the Seyfert Galaxy Ton S180.
- KROLIK, JULIAN H. Global MHD Simulation of the Inner Accretion Disk in a Pseudo-Newtonian Potential. John F. Hawley & Julian H. Krolik. 548, 348 (2001)
- KRONBERG, P. P. A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields. T. E. Clarke, P. P. Kronberg, & Hans Bohringer. 547, L111 (2001)
- KUBOTA, A. Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro. 547, L119 (2001)
- KUDRITZKI, R. P. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- KUDRITZKI, ROLF-PETER. Stellar Spectroscopy Far beyond the Local Group. Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla. 548, L159 (2001)
- KUIJEN, K. See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- KULKARNI, S. R. Intrinsic and Reprocessed Optical Emission from the Companion to PSR J2051–0827. B. W. Stappers, M. H. van Kerkwijk, J. F. Bell, & S. R. Kulkarni. 548, L183 (2001)
- KULKARNI, VARSHA P. H $_2$ , C I, Metallicity, and Dust Depletion in the  $z = 2.34$  Damped Ly $\alpha$  Absorption System toward QSO 1232+0815. Jian Ge, Jill Bechtold, & Varsha P. Kulkarni. 547, L1 (2001)
- KUMAR, P. Energy Distribution of Solar Oscillation Modes Inferred from Space-based Measurements. M. F. Woodard, S. G. Korzennik, M. C. Rabello-Soares, P. Kumar, T. D. Tarbell, & S. Action. 548, L103 (2001)
- KUNDU, M. R. Spatial Structure of Simple Spiky Bursts at Microwave/Millimeter Wavelengths. M. R. Kundu, S. M. White, K. Shibasaki, T. Sakurai, & V. V. Grechnev. 547, 1090 (2001)
- KUNTSCHNER, HARALD. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- KUNTZ, K. D. X-Ray Constraints on the Warm-Hot Intergalactic Medium. K. D. Kuntz, S. L. Snowden, & R. F. Mushotzky. 548, L119 (2001)
- KUNZL, THOMAS. Synchrotron Model for the Infrared, Optical, and X-Ray Emission of the Crab Pulsar. André R. Crusius-Wätzel, Thomas Kunzl, & Harald Lesch. 546, 401 (2001)
- Charge Densities above Pulsar Polar Caps. Axel Jessner, Harald Lesch, & Thomas Kunzl. 547, 959 (2001)
- KUPKA, F. Model Atmospheres with Individualized Abundances. N. Piskunov & F. Kupka. 547, 1040 (2001)
- KUULKERS, E. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the Chandra LETGS Spectrum of X0614+091.
- KYRIAZOPOULOU, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LA BARBERA, A. A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba. 547, 412 (2001)
- LAI, SHIH-PING. A Critical Examination of Hypervelocity Remnant Candidates in M101. I. MF 83. Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel. 547, 754 (2001)
- LAKE, G. The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake. 547, 555 (2001)
- LAKE, GEORGE. Tidal Stirring and the Origin of Dwarf Spheroidal in the Local Group. Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake. 547, L123 (2001)
- LAMANNA, E. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LAMB, DONALD Q. Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb. 546, 1098 (2001)
- LAMBAS, DIEGO G. Do Clusters Contain a Large Population of Dwarf Galaxies? Carlos A. Valotto, Ben Moore, & Diego G. Lambas. 546, 157 (2001)
- LAMING, J. M. The Solar Helium Abundance in the Outer Corona Determined from Observations with SUMER/SOHO. J. M. Laming & U. Feldman. 546, 552 (2001)
- Properties of Solar Polar Coronal Hole Plasmas Observed above the Limb. G. A. Doschek, U. Feldman, J. M. Laming, U. Schühle, & K. Wilhelm. 546, 559 (2001)



- LAMING, J. MARTIN. Accelerated Electrons in Cassiopeia A: An Explanation for the Hard X-Ray Tail. *J. Martin Laming*. 546, 1149 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin*. 548, L81 (2001)
- LAMPEITL, H. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- LANDSMAN, WAYNE. Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cherie L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth*. 546, 866 (2001)
- LANDSMAN, WAYNE B. Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Veira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia*. 547, L155 (2001)
- LANE, ADAIR P. See OJHA, ROOPESH, et al. AST/RO Observations of Atomic Carbon near the Galactic Center.
- LANE, B. F. A Preliminary Visual Orbit of BY Draconis. *A. F. Boden & B. F. Lane*. 547, 1071 (2001)
- LANE, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LANZA, ANTONINO F. Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiuchos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane*. 547, 1116 (2001)
- LANZAFAME, ALESSANDRO C. Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiuchos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane*. 547, 1116 (2001)
- LAOR, A. Heavy X-Ray Absorption in Soft X-Ray–Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyomoto*. 546, 795 (2001)
- LARKIN, J. E. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- LAUER, TOD R. Observational Constraints on Higher Order Clustering up to  $z \approx 1$ . *István Szapudi, Marc Postman, Tod R. Lauer, & William Oegerle*. 548, 114 (2001)
- LAURENT-MUEHLEISEN, S. A. QSO 2359–1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack*. 546, 134 (2001)
- Composite Spectra from the FIRST Bright Quasar Survey. *M. S. Brotherton, Hien D. Tran, R. H. Becker, Michael D. Gregg, S. A. Laurent-Muehleisen, & R. L. White*. 546, 775 (2001)
- Quasar Absorption Lines as a Function of Quasar Orientation Measures. *Gordon T. Richards, S. A. Laurent-Muehleisen, Robert H. Becker, & Donald G. York*. 547, 635 (2001)
- LAURENT-MUEHLEISEN, SALLY A. Keck HIRES Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. *Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista*. 548, 609 (2001)
- LAWLER, J. E. Absorption of Ti II Vacuum Ultraviolet Resonance Transitions. *L. M. Wiese, J. A. Fedchak, & J. E. Lawler*. 547, 1178 (2001)
- LAWRENCE, K. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB173.
- LAYCOCK, S. Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from RXTE Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler*. 548, L41 (2001)
- LAZIO, T. JOSEPH W. The Extreme Scattering Event toward 1741–038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston*. 546, 267 (2001)
- LEAHY, D. A. Ginga Observations of Hercules X-1: Spectrum Dependence on 35 Day Phase. *D. A. Leahy*. 547, 449 (2001)
- LEAHY, DENIS A. A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. *Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy*. 547, L129 (2001)
- LEE, ARIANE. The Multitude of Unresolved Continuum Sources at 1.6 Microns in Hubble Space Telescope Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke*. 547, 129 (2001)
- LEE, C.-H. Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe*. 547, 345 (2001)
- LEE, H. Y. The Formation of C<sub>5</sub>H<sub>5</sub> Isomers as Potential Key Intermediates to Polycyclic Aromatic Hydrocarbon-like Molecules. *R. I. Kaiser, H. Y. Lee, A. M. Mebel, & Y. T. Lee*. 548, 852 (2001)
- LEE, S.-W. Molecular Gas and the Modest Star Formation Efficiency in the “Antennae” Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee*. 548, 172 (2001)
- LEE, SANGWOO. A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang*. 547, L85 (2001)
- Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang*. 548, 497 (2001)
- LEE, T.-H. Molecular Gas and the Modest Star Formation Efficiency in the “Antennae” Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee*. 548, 172 (2001)
- LEE, TYPHOON. The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. *Frank H. Shu, Hsien Shang, Matthieu Gounelle, Alfred E. Glassgold, & Typhoon Lee*. 548, 1029 (2001)
- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Matthieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee*. 548, 1051 (2001)
- LEE, UMIN.  $r$ -Modes of Neutron Stars with a Solid Crust. *Shijun Yoshida & Umin Lee*. 546, 1121 (2001)
- LEE, Y. T. The Formation of C<sub>5</sub>H<sub>5</sub> Isomers as Potential Key Intermediates to Polycyclic Aromatic Hydrocarbon-like Molecules. *R. I. Kaiser, H. Y. Lee, A. M. Mebel, & Y. T. Lee*. 548, 852 (2001)
- LEGGETT, S. K. Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschildt, & Andreas Schweitzer*. 548, 908 (2001)
- LEHÁR, J. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- An Efficient Search for Gravitationally Lensed Radio Lobes. *J. Lehar, A. Buchalter, R. G. McMahon, C. S. Kochanek, & T. W. B. Muxlow*. 547, 60 (2001)
- LEIBUNDGUT, BRUNO. See LENTZ, ERIC J., et al. Analysis of the Type II In SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- LEIGHLY, K. M. A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. *J. P. Halpern, E. V. Gotthelf, K. M. Leighly, & D. J. Helfand*. 547, 323 (2001)
- LEITHERER, CLAUS. The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst–Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer*. 546, 845 (2001)
- LEMKE, M. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- LENNON, D. J. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- LENTZ, ERIC J. SN 1984A and Delayed-Detonation Models of Type Ia Supernovae. *Eric J. Lentz, E. Baron, David Branch, & Peter H. Hauschildt*. 547, 402 (2001)
- Analysis of the Type II In SN 1998S: Effects of Circumstellar Interaction on Observed Spectra. *Eric J. Lentz, E. Baron, Peter Lundqvist, David Branch, Peter H. Hauschildt, Claes Fransson, Peter Garnavich, Nate Bastian, Alexei V. Filippenko, R. P. Kirshner, P. M. Chellis, S. Jha, Bruno Leibundgut, R. McCray, E. Michael, Nino Panagia, M. M. Phillips, C. S. J. Pun, Brian Schmidt, George Sonneborn, N. B. Suntzeff, L. Wang, & J. C. Wheeler*. 547, 406 (2001)
- LÉPINE, J. R. D. A New Model for the Spiral Structure of the Galaxy. Superposition of 2- and 4-armed Patterns. *J. R. D. Lépine, Yu. N. Mishurov, & S. Yu. Dedikov*. 546, 234 (2001)
- LESCH, H. The Critical Velocity Effect as a Cause for the H $\alpha$  Emission from the Magellanic Stream. *C. Konz, H. Lesch, G. T. Birk, & H. Wiechen*. 548, 249 (2001)
- LESCH, HARALD. Synchrotron Model for the Infrared, Optical, and X-Ray Emission of the Crab Pulsar. *André R. Crusius-Wätzel, Thomas Kunz, & Harald Lesch*. 546, 401 (2001)

- Charge Densities above Pulsar Polar Caps. *Axel Jessner, Harald Lesch, & Thomas Kunz*. 547, 959 (2001)
- LEVATO, H. Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer*. 548, L95 (2001)
- LEVENSON, N. A. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- LEVIN, D. S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LEVINE, ALAN M. The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport*. 546, 455 (2001)
- LEWIN, W. H. G. Relativistic Iron Emission and Disk Reflection in Galactic Microquasars XTE J1748-288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin*. 546, 1055 (2001)
- LEWIS, B. M. The Approaching Death of the OH/IR Star IRAS 18455+0448. *B. M. Lewis, B. D. Oppenheimer, & I. J. Daubar*. 548, L77 (2001)
- LEWIS, G. F. The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger*. 548, L147 (2001)
- LEWIS, GERAINT F. Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte*. 547, L133 (2001)
- LEWIS, ROY S. Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis*. 546, 248 (2001)
- LI, JIANKE. The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube. *Geoffrey V. Bicknell & Jianke Li*. 548, L69 (2001)
- LI, K. H. Search for Short Variability Timescale of the GeV Gamma-Ray-loud Blazars. *G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing*. 548, 200 (2001)
- LI, WEIDONG. Monte Carlo Simulations of Type Ia Supernova Observations in Supernova Surveys. *Weidong Li, Alexei V. Filippenko, & Adam G. Riess*. 546, 719 (2001)
- A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu*. 546, 734 (2001)
- LI, Z. W. The Abundance Patterns of Sirius and Vega. *H. M. Qui, G. Zhao, Y. Q. Chen, & Z. W. Li*. 548, 953 (2001)
- LIDDLE, ANDREW R. A Serendipitous Galaxy Cluster Survey with XMM: Expected Catalog Properties and Scientific Applications. *A. Kathy Romer, Pedro T. P. Viana, Andrew R. Liddle, & Robert G. Mann*. 547, 594 (2001)
- LIEDAHL, DUANE A. The X-Ray Photoionized Wind in Cen X-3/V779 Cen. *Patrick S. Wojdowski, Duane A. Liedahl, & Masao Sako*. 547, 973 (2001)
- LIEU, RICHARD. The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 546, 805 (2001)
- The Extreme-Ultraviolet Excess Emission of the Virgo and A1795 Clusters: Reobservation with In Situ Background Measurements. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 547, L7 (2001)
- LILLY, SIMON J. The Metallicity of  $0.5 < z < 1$  Field Galaxies. *C. Marcella Carollo & Simon J. Lilly*. 548, L153 (2001)
- LIMON, M. Millimetric Ground-based Observation of CMBR Anisotropy at  $\delta = +28^\circ$ . *G. Romeo, S. Ali, B. Femenia, M. Limon, L. Piccirillo, & R. Rebolo*. 548, L1 (2001)
- LIN, D. N. C. On the Tidal Inflation of Short-Period Extrasolar Planets. *Peter Bodenheimer, D. N. C. Lin, & R. A. Mardling*. 548, 466 (2001)
- LIN, H. The Evolution of Population Gradients in Galaxy Clusters: The Butcher-Oemler Effect and Cluster Infall. *E. Ellingson, H. Lin, H. K. C. Yee, & R. G. Carlberg*. 547, 609 (2001)
- See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- LIN, Y. A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon*. 547, 1159 (2001)
- LINGENFELTER, R. E. Does Pulsar B1757-24 Have a fallback Disk? *D. Marsden, R. E. Lingenfelter, & R. E. Rothschild*. 547, L45 (2001)
- LINKER, JON A. Including the Transition Region in Models of the Large-Scale Solar Corona. *Roberto Lionello, Jon A. Linker, & Zoran Mikić*. 546, 542 (2001)
- LINSKY, JEFFREY L. Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using Hubble Space Telescope Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank*. 547, L49 (2001)
- LIONELLO, ROBERTO. Including the Transition Region in Models of the Large-Scale Solar Corona. *Roberto Lionello, Jon A. Linker, & Zoran Mikić*. 546, 542 (2001)
- LIPARI, P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LITES, B. W. Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich*. 547, 1130 (2001)
- See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- LITVAK, MAXIM L. See MITROFANOV, IGOR G., et al. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts.
- LIU, GUO-CHIN. Nonlinear Evolution of Very Small Scale Cosmological Baryon Perturbations at Recombination. *Guo-Chin Liu, Kazuhiro Yamamoto, Naoshi Sugiyama, & Hiroaki Nishioka*. 547, 1 (2001)
- LIU, W. W. Search for Short Variability Timescale of the GeV Gamma-Ray-loud Blazars. *G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing*. 548, 200 (2001)
- LIVINGSTON, W. C. Quiet-Sun Variability in a Temperature Minimum Region. *Y. X. Zhang, C. Fang, M. D. Ding, & W. C. Livingston*. 547, L179 (2001)
- LO, K. Y. Molecular Gas and the Modest Star Formation Efficiency in the "Antennae" Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee*. 548, 172 (2001)
- LOBANOV, A. P. VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . *A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth*. 547, 714 (2001)
- LOBO, J. A. Nonlinear Gravitational Growth of Large-Scale Structures inside and outside Standard Cosmology. *E. Gaztañaga & J. A. Lobo*. 548, 47 (2001)
- LOEB, ABRAHAM. Gravitational Microlensing of Gamma-Ray Burst Afterglows by Single and Binary Stars. *Shude Mao & Abraham Loeb*. 547, L97 (2001)
- Does the Mass Accretion Rate Depend on the Radius of the Accreting Star? *Abraham Loeb, Ramesh Narayan, & John C. Raymond*. 547, L151 (2001)
- LOEWENSTEIN, MICHAEL. RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky*. 547, 722 (2001)
- LOKEN, CHRIS. The Effect of the Cosmic Web on Cluster Weak Lensing Mass Estimates. *Christopher A. Metzler, Martin White, & Chris Loken*. 547, 560 (2001)
- LOMBARDI, JAMES C., JR. Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren*. 548, 323 (2001)
- LOMBARDI, MARCO. Double Lenses. *Giuseppe Bertin & Marco Lombardi*. 546, 47 (2001)
- LONGLEY, N. P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LONGO, M. J. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LOPARCO, F. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- LOPES, D. F. Variability of Southern T Tauri Stars. I. The Continuum and the H $\beta$  Inverse P Cygni Profile of GQ Lupi. *C. Batalha, D. F. Lopes, & N. M. Batalha*. 548, 377 (2001)
- LÓPEZ-MARTÍN, L. Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). *L. López-Martín, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto*. 548, 288 (2001)
- LORENZ, E. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- LOU, YU-QING. Magnetoinertial Oscillations of Jupiter's Inner Radiation Belt. *Yu-Qing Lou*. 548, 460 (2001)

- LU, T. Prompt High-Energy Gamma-Ray Emission from Synchrotron Self-Compton Process in the Reverse Shocks of Gamma-Ray Bursts. *X. Y. Wang, Z. G. Dai, & T. Lu*. 546, L33 (2001)
- LUCARELLI, F. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- LUGARO, MARIA. Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis*. 546, 248 (2001)
- LUGGER, PHYLLIS. Stellar Variability in the Metal-rich, Obscured Globular Cluster Terzan 5. *Peter D. Edmonds, Jonathan E. Grindlay, Haldan Cohn, & Phyllis Lugger*. 547, 829 (2001)
- LUKASIAK, ANDREW. The Modified Weighted Slab Technique: Models and Results. *Frank C. Jones, Andrew Lukasiak, Vladimir Ptuskin, & William Webber*. 547, 264 (2001)
- LUNDQVIST, PETER. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- LUPPINO, GERARD A. The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- LUPTON, ROBERT H. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- LYERLY, WILLIAM J. Supernova Remnants in the Sedov Expansion Phase: Thermal X-Ray Emission. *Kazimierz J. Borkowski, William J. Lyerly, & Stephen P. Reynolds*. 548, 820 (2001)
- LYNE, A. G. Observations of a Series of Six Recent Glitches in the Crab Pulsar. *Tony Wong, D. C. Backer, & A. G. Lyne*. 548, 447 (2001)
- Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo*. 548, L171 (2001)
- See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- LYNE, ANDREW G. A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne*. 546, L25 (2001)
- LYUBARSKY, Y. Reconnection in a Striped Pulsar Wind. *Y. Lyubarsky & J. G. Kirk*. 547, 437 (2001)
- MAAROUFI, F. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MABOUDIAN, R. Vibrational Spectra of Hydrogenated Buckminsterfullerene: A Candidate for the Unidentified Infrared Emission. *C. R. Stoldt, R. Maboudian, & C. Carraro*. 548, L225 (2001)
- MACHACEK, MARIE E. Simulations of Pregalactic Structure Formation with Radiative Feedback. *Marie E. Machacek, Greg L. Bryan, & Tom Abel*. 548, 509 (2001)
- MAC LOW, MORDECAI-MARK. Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence. *Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen*. 547, 280 (2001)
- MACNEICE, PETER J. Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiochos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane*. 547, 1116 (2001)
- MADAU, PIERO. On the Association of Gamma-Ray Bursts with Massive Stars: Implications for Number Counts and Lensing Statistics. *Cristiano Porciani & Piero Madau*. 548, 522 (2001)
- MAEDA, KEI-ICHI. Primordial Fractal Density Perturbations and Structure Formation in the Universe: One-dimensional Collisionless Sheet Model. *Takayuki Tatekawa & Kei-ichi Maeda*. 547, 531 (2001)
- MAEZAWA, HIROYUKI. See YAMAMOTO, SATOSHI, et al. Observation of the C I  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- MAGEE-SAUER, K. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- MAGNUSSEN, N. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- MAGRIS, G. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- MAHDAVI, ANDISHEH. The Orbital Structure of Dark Matter Halos with Gas. *Andisheh Mahdavi*. 546, 812 (2001)
- MAKINO, JUNICHIRO. How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut*. 546, L101 (2001)
- MAKISHIMA, K. X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). *M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda*. 546, L19 (2001)
- Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. *A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro*. 547, L119 (2001)
- MAKISHIMA, KAZUO. Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae*. 546, L87 (2001)
- MALHOTRA, SANGEETA. Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Helou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi*. 548, L73 (2001)
- MALUMUTH, ELIOT. Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cherie L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth*. 546, 866 (2001)
- MALUMUTH, ELIOT M. Wide-Field Imaging of the Hubble Deep Field–South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate*. 548, 127 (2001)
- MAMPASO, ANTONIO. Low-Ionization Structures in Planetary Nebulae: Confronting Models with Observations. *Denise R. Gonçalves, Romano L. M. Corradi, & Antonio Mampaso*. 547, 302 (2001)
- MAMUN, A. A. Instabilities in a Nonuniform Partially Ionized Isothermal Magnetoplasma. *A. A. Mamun & P. K. Shukla*. 548, 269 (2001)
- MANCARELLA, G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MANCHESTER, R. N. Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo*. 548, L171 (2001)
- See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- MANCHESTER, RICHARD N. A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne*. 546, L25 (2001)
- MANCHESTER, WARD, IV. The Role of Nonlinear Alfvén Waves in Shear Formation during Solar Magnetic Flux Emergence. *Ward Manchester IV*. 547, 503 (2001)
- MANDRIOLI, G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MANG, O. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- MANICO, G. Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali*. 548, L253 (2001)
- MANN, ROBERT G. A Serendipitous Galaxy Cluster Survey with XMM: Expected Catalog Properties and Scientific Applications. *A. Kathy Romer, Pedro T. P. Viana, Andrew R. Liddle, & Robert G. Mann*. 547, 594 (2001)
- MANRIQUE, ALBERTO. The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes*. 548, 97 (2001)
- MANZOO, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MAO, SHUDE. Gravitational Microlensing of Gamma-Ray Burst Afterglows by Single and Binary Stars. *Shude Mao & Abraham Loeb*. 547, L97 (2001)
- MARDLING, R. A. On the Tidal Inflation of Short-Period Extrasolar Planets. *Peter Bodenheimer, D. N. C. Lin, & R. A. Mardling*. 548, 466 (2001)
- MARGIOTTA, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MARGONINER, V. E. The Butcher-Oemler Effect in 295 Clusters: Strong Redshift Evolution and Cluster Richness Dependence. *V. E. Margoniner, R. R. de Carvalho, R. R. Gal, & S. G. Djorgovski*. 548, L143 (2001)
- MARINI, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.



- MARKOWITZ, A. An *RXTE* Survey of Long-Term X-Ray Variability in Seyfert 1 Galaxies. *A. Markowitz & R. Edelson*. 547, 684 (2001)
- MARSDEN, D. Does Pulsar B1757–24 Have a fallback Disk? *D. Marsden, R. E. Lingenfelter, & R. E. Rothschild*. 547, L45 (2001)
- MARSH, K. A. Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. *K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler*. 548, 861 (2001)
- MARSHALL, F. E. Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from *RXTE* Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler*. 548, L41 (2001)
- MARSHALL, H. L. See KAARET, P., et al. *Chandra* Observations of the Young Pulsar PSR B0540–69.
- MARTELLO, D. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MARTIN, EDUARDO L. From the Top to the Bottom of the Main Sequence: A Complete Mass Function of the Young Open Cluster M35. *David Barrado y Navascués, John R. Stauffer, Jerome Bouvier, & Eduardo L. Martin*. 546, 1006 (2001)
- MARTIN, SARA F. Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang*. 548, 497 (2001)
- MARTINEZ-PAIS, IGNACIO G. Evidence of Magnetic Accretion in LS Pegasi Star: Discovery of Variable Circular Polarization in LS Pegasi. *Pablo Rodríguez-Gil, Jorge Casares, Ignacio G. Martínez-Pais, Pasi Hakala, & Danny Steeghs*. 548, L49 (2001)
- MARTÍNEZ PILLET, V. Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich*. 547, 1130 (2001)
- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet*. 547, 1148 (2001)
- MARTINI, PAUL. Quasar Clustering and the Lifetime of Quasars. *Paul Martini & David H. Weinberg*. 547, 12 (2001)
- MARTIN-PINTADO, JESUS. Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodríguez-Fernández, & A. Fuente*. 548, L65 (2001)
- MARUYAMA, TOSHIKI. Magnetic Field Effect on Masses of Atomic Nuclei. *V. N. Kondratyev, Toshiaki Maruyama, & Satoshi Chiba*. 546, 1137 (2001)
- MARVEL, KEVIN B. A VLA Search for the Ohio State "Wow." *Robert H. Gray & Kevin B. Marvel*. 546, 1171 (2001)
- MARZARI-CHIESA, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MASETTI, N. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- MATARRESE, S. Implications for Quintessence Models from MAXIMA-1 and BOOMERANG-98. *A. Balbi, C. Baccigalupi, S. Matarrese, F. Perrotta, & N. Vittorio*. 547, L89 (2001)
- MATEU, J. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- MATHEWS, G. J. Cold Ideal Equation of State for Strongly Magnetized Neutron-Star Matter: Effects on Muon Production and Pion Condensation. *In-Saeng Suh & G. J. Mathews*. 546, 1126 (2001)
- MATHIESEN, B. F. Four Measures of the Intracluster Medium Temperature and Their Relation to a Cluster's Dynamical State. *B. F. Mathiesen & A. E. Evrard*. 546, 100 (2001)
- MATHUR, S. Heavy X-Ray Absorption in Soft X-Ray-Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverly J. Wills, & N. Iyomoto*. 546, 795 (2001)
- MATSUMOTO, H. Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the *Chandra* High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe*. 547, L25 (2001)
- MATSUSHITA, KYOKO. Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae*. 546, L87 (2001)
- Origin of the Scatter in the X-Ray Luminosity of Early-Type Galaxies Observed with *ROSAT*. *Kyoko Matsushita*. 547, 693 (2001)
- MATSUSHITA, S. Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the *Chandra* High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe*. 547, L25 (2001)
- MATTHAEUS, W. H. Wave-driven Turbulent Coronal Heating in Open Field Line Regions: Nonlinear Phenomenological Model. *P. Dmitruk, L. J. Milano, & W. H. Matthaeus*. 548, 482 (2001)
- MATTHEWS, L. D. Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. *L. D. Matthews & Kenneth Wood*. 548, 150 (2001)
- MAYER, LUCIO. Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake*. 547, L123 (2001)
- MAZZALI, PAOLO A. Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto*. 547, 988 (2001)
- MAZZIOTTA, M. N. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MAZZOTTA, P. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- MCCARTHY, J. K. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- MCCARTHY, M. C. The Cyclic C<sub>5</sub>H Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus*. 547, L65 (2001)
- MCLINTOCK, JEFFREY E. Optical Observations of the Black Hole Candidate XTE J1550–564 during Reflare and Quiescence. *Raj K. Jain, Charles D. Bailyn, Jerome A. Orosz, Jeffrey E. McClintock, Gregory J. Sobczak, & Ronald A. Remillard*. 546, 1086 (2001)
- MCCRAY, R. See LENTZ, ERIC J., et al. Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- MCDONALD, COLLEEN. The Multitude of Unresolved Continuum Sources at 1.6 Microns in *Hubble Space Telescope* Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke*. 547, 129 (2001)
- McFARLAND, J. P. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- MCINTOSH, S. W. An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region. *S. W. McIntosh, T. J. Bogdan, P. S. Cally, M. Carlsson, V. H. Hansteen, P. G. Judge, B. W. Lites, H. Peter, C. S. Rosenthal, & T. D. Tarbell*. 548, L237 (2001)
- McKAY, N. P. F. See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- MCLAUGHLIN, BRENDAN M. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091.
- MCLAUGHLIN, M. A. Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia A. *M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern*. 547, L41 (2001)
- MCLEAN, I. S. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- MCLEOD, B. A. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- NICMOS Observations of Low-Redshift Quasar Host Galaxies. *K. K. McLeod & B. A. McLeod*. 546, 782 (2001)
- The Importance of Einstein Rings. *C. S. Kochanek, C. R. Keeton, & B. A. McLeod*. 547, 50 (2001)
- MCLEOD, K. K. NICMOS Observations of Low-Redshift Quasar Host Galaxies. *K. K. McLeod & B. A. McLeod*. 546, 782 (2001)
- MCMAHON, R. G. An Efficient Search for Gravitationally Lensed Radio Lobes. *J. Lehar, A. Buchalter, R. G. McMahon, C. S. Kochanek, & T. W. B. Muxlow*. 547, 60 (2001)
- McMILLAN, STEPHEN L. W. How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut*. 546, L101 (2001)
- McNAMARA, B. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- McNAMARA, B. R. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.

- MC SWAIN, M. V. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- MEBEL, A. M. The Formation of  $C_5H_2$  Isomers as Potential Key Intermediates to Polycyclic Aromatic Hydrocarbon-like Molecules. *R. I. Kaiser, H. Y. Lee, A. M. Mebel, & Y. T. Lee*. 548, 852 (2001)
- MEEGAN, CHARLES A. See MITROFANOV, IGOR G., et al. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts.
- MEHTA, M. Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Sawant, & J. A. C. F. Neri*. 548, L87 (2001)
- MEIER, D. L. The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation. *D. L. Meier*. 548, L9 (2001)
- MEIXNER, MARGARET. Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 19.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman*. 548, 1020 (2001)
- MELIA, FULVIO. A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. *Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy*. 547, L129 (2001)
- MELLEMA, G. Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). *L. López-Martín, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto*. 548, 288 (2001)
- MELOTT, ADRIAN L. The Size and Shape of Voids in Three-dimensional Galaxy Surveys. *Jason D. Schmidt, Barbara S. Ryden, & Adrian L. Melott*. 546, 609 (2001)
- MENDEZ, M. Study of the Temporal Behavior of 4U 1728–34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba*. 546, 1107 (2001)
- MÉNDEZ, RENÉ A. The Luminosity Function of Magnitude and Proper-Motion-selected Samples: The Case of White Dwarfs. *René A. Méndez & María Teresa Ruiz*. 547, 252 (2001)
- MENDEZ, ROBERTO H. Stellar Spectroscopy Far beyond the Local Group. *Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla*. 548, L159 (2001)
- MEREGHETTI, S. The X-Ray Sources at the Center of the Supernova Remnant RX J0852.0–4622. *S. Meregheiti*. 548, L213 (2001)
- MERRITT, DAVID. The  $M_{\bullet}$ - $\sigma$  Relation for Supermassive Black Holes. *David Merritt & Laura Ferrarese*. 547, 140 (2001)
- METCALFE, T. S. The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models. *M. H. Montgomery, T. S. Metcalfe, & D. E. Winget*. 548, L53 (2001)
- METZGER, MARK R. The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- METZLER, CHRISTOPHER A. The Effect of the Cosmic Web on Cluster Weak Lensing Mass Estimates. *Christopher A. Metzler, Martin White, & Chris Loken*. 547, 560 (2001)
- MEYER, H. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- MEZZETTI, MARINO. Evolution of the Internal Dynamics of Galaxy Clusters. *Marisa Girardi & Marino Mezzetti*. 548, 79 (2001)
- MICELA, G. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- MICHAEL, D. G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MICHAEL, E. See LENTZ, ERIC J., et al. Analysis of the Type IIIn SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- MIKAMI, HITOMI. SiO Emission in the Multilobe Outflow Associated with IRAS 16293–2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi*. 547, 899 (2001)
- MIKHEYEV, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MIKIĆ, ZORAN. Including the Transition Region in Models of the Large-Scale Solar Corona. *Roberto Lionello, Jon A. Linker, & Zoran Mikić*. 546, 542 (2001)
- MILANO, L. J. Wave-driven Turbulent Coronal Heating in Open Field Line Regions: Nonlinear Phenomenological Model. *P. Dmitruk, L. J. Milano, & W. H. Matthaeus*. 548, 482 (2001)
- MILLAN-GABET, RAFAEL. Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub*. 546, 358 (2001)
- MILLER, BRYAN W. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- MILLER, J. M. Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748–288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin*. 546, 1055 (2001)
- MILLER, L. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MILLER, M. COLEMAN. Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. *Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb*. 546, 1098 (2001)
- MILLER, W. A. Estimation of Relativistic Accretion Disk Parameters from Iron Line Emission. *V. I. Pariev, B. C. Bromley, & W. A. Miller*. 547, 649 (2001)
- MILNE, D. K. The Radio Structure of the Supernova Remnant G315.4–2.3 (MSH 14–63). *John R. Dickel, Richard G. Strom, & D. K. Milne*. 546, 447 (2001)
- MINESHIGE, SHIN. Broadband Spectral Energy Distributions of Active Galactic Nuclei from an Accretion Disk with Advective Coronal Flow. *Toshihiro Kawaguchi, Toshiya Shimura, & Shin Mineshige*. 546, 966 (2001)
- MIRABEL, I. F. See CUI, WEI, et al. Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942.
- MIRABEL, N. A Neutron Star Identification for the High-Energy Gamma-Ray Source 3EG J1835+5918 Detected in the ROSAT All-Sky Survey. *N. Mirabel & J. P. Halpern*. 547, L137 (2001)
- MIRZOYAN, R. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- MISCH, ANTHONY A. The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch*. 548, 550 (2001)
- MISHUROV, YU. N. A New Model for the Spiral Structure of the Galaxy. Superposition of 2- and 4-armed Patterns. *J. R. D. Lépine, Yu. N. Mishurov, & S. Yu. Dedikov*. 546, 234 (2001)
- MISKEY, CHERIE L. Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cherie L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth*. 546, 866 (2001)
- MITROFANOV, IGOR G. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts. *Igor G. Mitrofanov, Maxim L. Litvak, Dmitriy S. Anfimov, Anton B. Sanin, Michael S. Briggs, William S. Paciesas, Geoffrey N. Pendleton, Robert D. Preece, & Charles A. Meegan*. 547, 334 (2001)
- MITTASZ, JONATHAN P. D. The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 546, 805 (2001)
- The Extreme-Ultraviolet Excess Emission of the Virgo and A1795 Clusters: Reobservation with In Situ Background Measurements. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 547, L7 (2001)
- MIYAJI, TAKAMITSU. A Rich Cluster of Galaxies near the Quasar B2 1335+28 at  $z = 1.1$ : Color Distribution and Star Formation Properties: Erratum. *Ichit Tanaka, Toru Yamada, Alfonso Aragón-Salamanca, Tadayuki Kodama, Takamitsu Miyaji, Kouji Ohta, & Nobuo Arimoto*. 546, 604 (2001) (Orig. paper in 528, 123 (2000))
- MIYATA, EMI. RXJ 0852.0–0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2–1.2). *Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, EMI Miyata, Hiroshi Tsunemi, & Bernd Aschenbach*. 548, 814 (2001)
- MIYAZAWA, KEISUKE. See YAMAMOTO, SATOSHI, et al. Observation of the  $C\text{ I }^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- MIZUNO, T. Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. *A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro*. 547, L119 (2001)
- MIZUTANI, M. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- MOLINARI, SERGIO. A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio*. 547, 292 (2001)
- MONACELLI, P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.

- MONNET, G. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- MONTARULLI, T. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MONTENO, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- MONTGOMERY, M. H. The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models. *M. H. Montgomery, T. S. Metcalfe, & D. E. Winget.* 548, L53 (2001)
- MOORE, B. The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake.* 547, 555 (2001)
- MOORE, BEN. Do Clusters Contain a Large Population of Dwarf Galaxies? *Carlos A. Valotto, Ben Moore, & Diego G. Lambas.* 546, 157 (2001)
- Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)
- MOORE, CHRISTOPHER B. The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore.* 546, 681 (2001)
- MORALEJO, A. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- MORIMOTO, T. Clear Evidence of Reconnection Inflow of a Solar Flare. *T. Yokoyama, K. Akita, T. Morimoto, K. Inoue, & J. Newmark.* 546, L69 (2001)
- MORRIS, S. L. See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- MORSE, JON A. Hubble Space Telescope Proper-Motion Measurements of the  $\eta$  Carinae Nebula. *Jon A. Morse, James R. Kellogg, John Bally, Kris Davidson, Bruce Balick, & Dennis Ebbets.* 548, L207 (2001)
- MÜLLER, HANS-REINHARD. Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using Hubble Space Telescope Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank.* 547, L49 (2001)
- MUFSON, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- MUKERJEE, K. Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan.* 548, 368 (2001)
- MUKHERJEE, R. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- MULLIS, C. R. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- MUMMA, M. J. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory. *M. J. Mumma, I. S. McLean, M. A. DiSantill, J. E. Larkin, N. Dello Russo, K. Magee-Sauer, E. E. Becklin, T. Bida, F. Chaffee, A. R. Conrad, D. F. Figer, A. M. Gilbert, J. R. Graham, N. A. Levenson, R. E. Novak, D. C. Reuter, H. I. Teplitz, M. K. Wilcox, & Li-Hong Xu.* 546, 1183 (2001)
- MUNN, JEFFREY A. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- MUÑOZ, J. A. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529. *J. A. Muñoz, E. E. Falco, C. S. Kochanek, J. Lehar, B. A. McLeod, B. R. McNamara, A. A. Vikhlinin, C. D. Impey, H.-W. Rix, C. R. Keeton, C. Y. Peng, & C. R. Mullis.* 546, 769 (2001)
- MUÑOZ-TUÑÓN, CASIANA. High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle.* 548, 671 (2001)
- MURAYAMA, TAKASHI. The Narrow-Line Region of Seyfert Galaxies: Narrow-Line Seyfert 1 Galaxies versus Broad-Line Seyfert 1 Galaxies. *Tohru Nagao, Takashi Murayama, & Yoshiaki Taniguchi.* 546, 744 (2001)
- LRG J0239–0134: A Ring Galaxy or a Pair of Superbubbles at  $z = 1$ ? *Yoshiaki Taniguchi & Takashi Murayama.* 547, L13 (2001)
- MURPHY, D. W. Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. *S. J. Tingay & D. W. Murphy.* 546, 210 (2001)
- MURRAY, S. See CAPPI, M., et al. Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- MURRAY, S. S. See KAARET, P., et al. Chandra Observations of the Young Pulsar PSR B0540–69.
- MUSHOTZKY, R. F. Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky.* 546, 759 (2001)
- X-Ray Constraints on the Warm-Hot Intergalactic Medium. *K. D. Kuntz, S. L. Snowden, & R. F. Mushotzky.* 548, L119 (2001)
- MUSHOTZKY, RICHARD F. RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky.* 547, 722 (2001)
- MUSSER, J. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- See SABBEY, C. N., et al. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- MUTCHLER, MAX. Morphology and Evolution of the Large Magellanic Cloud Planetary Nebulae. *Richard A. Shaw, Letizia Stanghellini, Max Mutchler, Bruce Balick, & J. Chris Blades.* 548, 727 (2001)
- MUXLOW, T. W. B. An Efficient Search for Gravitationally Lensed Radio Lobes. *J. Lehar, A. Buchalter, R. G. McMahon, C. S. Kochanek, & T. W. B. Muxlow.* 547, 60 (2001)
- MUZZIO, JUAN C. On the Effect of Chaotic Orbits on Dynamical Friction. *Sofia A. Cora, M. Marcela Vergne, & Juan C. Muzzio.* 546, 165 (2001)
- NAGAO, TOHRU. The Narrow-Line Region of Seyfert Galaxies: Narrow-Line Seyfert 1 Galaxies versus Broad-Line Seyfert 1 Galaxies. *Tohru Nagao, Takashi Murayama, & Yoshiaki Taniguchi.* 546, 744 (2001)
- NAGASHIMA, MASAHIRO. Morphology-Density Relation for Simulated Clusters of Galaxies in Cold Dark Matter-dominated Universes. *Takashi Okamoto & Masahiro Nagashima.* 547, 109 (2001)
- NAIK, S. Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. *S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan.* 546, 1075 (2001)
- NAKAGAWA, T. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- NAKAMURA, FUMITAKA. On the Initial Mass Function of Population III Stars. *Fumitaka Nakamura & Masayuki Umemura.* 548, 19 (2001)
- NAKAMURA, TAKAYOSHI. Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto.* 547, 988 (2001)
- NAKAZAWA, KAZUHIRO. Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae.* 546, L87 (2001)
- NANDRA, K. Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky.* 546, 759 (2001)
- See TURNER, T. J., et al. Chandra Grating Spectroscopy of the Seyfert Galaxy Ton S180.
- NARANJO, O. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- NARAYAN, RAMESH. Does the Mass Accretion Rate Depend on the Radius of the Accreting Star? *Abraham Loeb, Ramesh Narayan, & John C. Raymond.* 547, L151 (2001)
- The Central X-Ray Point Source in Cassiopeia A. *Deepto Chakrabarty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan.* 548, 800 (2001)
- NARITA, T. ASCA Observations of GX 354–0 and KS 1731–260. *T. Narita, J. E. Grindlay, & D. Barret.* 547, 420 (2001)
- NAYAKSHIN, S. Observational Signatures of X-Ray-irradiated Accretion Disks. *C. Done & S. Nayakshin.* 546, 419 (2001)



- NAYAKSHIN, SERGEI. Accretion Disk Models and Their X-Ray Reflection Signatures. I. Local Spectra. *Sergei Nayakshin & Timothy R. Kallman*. 546, 406 (2001)
- NEFF, SUSAN G. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- NEILL, JAMES D. The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch*. 548, 550 (2001)
- NERI, J. A. C. F. Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Sawant, & J. A. C. F. Neri*. 548, L87 (2001)
- NERI, R. Methylpolynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters*. 546, L127 (2001)
- NETZER, HAGAI. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L13 (2001)
- NEW, KIMBERLY C. B. Evolution of Differentially Rotating Supermassive Stars to the Onset of Bar Instability. *Kimberly C. B. New & Stuart L. Shapiro*. 548, 439 (2001)
- NEWMARK, J. Clear Evidence of Reconnection Inflow of a Solar Flare. *T. Yokoyama, K. Akita, T. Morimoto, K. Inoue, & J. Newmark*. 546, L69 (2001)
- NG, C. K. Heavy Ion Abundances and Spectra and the Large Gradual Solar Energetic Particle Event of 2000 July 14. *D. V. Reames, C. K. Ng, & A. J. Tylka*. 548, L233 (2001)
- NG, C. S. Random Scattering and Anisotropic Turbulence of Shear-Alfvén Wave Packets. *A. Bhattacharjee & C. S. Ng*. 548, 318 (2001)
- NICASTRO, F. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- NICKLAS, H. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- NICOLÓ, D. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- NIKOLAEV, SERGEI. Structure of the Large Magellanic Cloud from 2MASS. *Martin D. Weinberg & Sergei Nikolaev*. 548, 712 (2001)
- NISENSEN, PETER. Detection of Earth-like Planets Using Apodized Telescopes. *Peter Nisenson & Costas Papaliolios*. 548, L201 (2001)
- NISHI, R. Dynamical Effects of Global Thermal Instability in Shock-compressed Gas Slabs. *M. Yamada & R. Nishi*. 547, 99 (2001)
- NISHIOKA, HIROAKI. Nonlinear Evolution of Very Small Scale Cosmological Baryon Perturbations at Recombination. *Guo-Chin Liu, Kazuhiro Yamamoto, Naoshi Sugiyama, & Hiroaki Nishioka*. 547, 1 (2001)
- NITTLER, LARRY R. Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis*. 546, 248 (2001)
- NOGUCHI, TAKASHI. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- NOLTY, R. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- NOMOTO, KENICHI. Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto*. 547, 988 (2001)
- NORDLUND, Å. Solar Oscillations and Convection. I. Formalism for Radial Oscillations. *Å. Nordlund & R. F. Stein*. 546, 576 (2001)
- Solar Oscillations and Convection. II. Excitation of Radial Oscillations. *R. F. Stein & Å. Nordlund*. 546, 585 (2001)
- NORIEGA-CRESPO, ALBERTO. A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio*. 547, 292 (2001)
- NORMAN, COLIN. The Evolution of X-Ray Clusters and the Entropy of the Intracluster Medium. *Paolo Tozzi & Colin Norman*. 546, 63 (2001)
- NORMAN, COLIN A. Numerical Models of the Multiphase Interstellar Matter with Stellar Energy Feedback on a Galactic Scale. *Keiichi Wada & Colin A. Norman*. 547, 172 (2001)
- NOUSEK, JOHN A. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L13 (2001)
- NOVAK, R. E. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- O'CONNELL, ROBERT W. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- ODENKIRCHEN, MICHAEL. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data. *Michael Odenkirchen, Eva K. Grebel, Constance M. Rockosi, Walter Dehnen, Rodrigo Ibata, Hans-Walter Rix, Andrea Stolte, Christian Wolf, John E. Anderson, Jr., Neta A. Bahcall, Jon Brinkmann, István Csabai, G. Hennessy, Robert B. Hindsley, Željko Ivezić, Robert H. Lupton, Jeffrey A. Munn, Jeffrey R. Pier, Chris Stoughton, & Donald G. York*. 548, L165 (2001)
- OEGERLE, WILLIAM. Observational Constraints on Higher Order Clustering up to  $z \approx 1$ . *István Szapudi, Marc Postman, Tod R. Lauer, & William Oegerle*. 548, 114 (2001)
- OEMLER, A. See SABBEY, C. N., et al. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB173.
- ÖZEL, FERYAL. X-Ray Images of Hot Accretion Flows. *Feryal Özel & Tiziana Di Matteo*. 548, 213 (2001)
- OFMAN, L. Constraints on the O $^{+5}$  Anisotropy in the Solar Corona. *L. Ofman, A. Viñas, & S. P. Gary*. 547, L175 (2001)
- OHASHI, TAKAYA. Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae*. 546, L87 (2001)
- OHISHI, MASATOSHI. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- OHNISHI, T. Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. *A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro*. 547, L119 (2001)
- OHTA, KOJI. A Rich Cluster of Galaxies near the Quasar B2 1335+28 at  $z = 1.1$ : Color Distribution and Star Formation Properties: Erratum. *Ichir Tanaka, Toru Yamada, Alfonso Aragón-Salamanca, Tadayuki Kodama, Takamitsu Miyaji, Kouji Ohta, & Nobuo Arimoto*. 546, 604 (2001) (Orig. paper in 528, 123 (2000))
- OJHA, ROOPESH. AST/RO Observations of Atomic Carbon near the Galactic Center. *Roopesh Ojha, Antony A. Stark, Henry H. Hsieh, Adair P. Lane, Richard A. Chamberlin, Thomas M. Bania, Alberto D. Bolatto, James M. Jackson, & Gregory A. Wright*. 548, 253 (2001)
- OKA, TOMOHARU. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- OKADA, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- OKAMOTO, TAKASHI. Morphology-Density Relation for Simulated Clusters of Galaxies in Cold Dark Matter-dominated Universes. *Takashi Okamoto & Masahiro Nagashima*. 547, 109 (2001)
- OKUDA, H. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- OKUMURA, K. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- OKUMURA, S. K. Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin*. 547, L115 (2001)
- OMUKAI, KAZUYUKI. Primordial Star Formation under Far-Ultraviolet Radiation. *Kazuyuki Omukai*. 546, 635 (2001)
- O'MULLANE, MARTIN G. Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K.*

- Antiochos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane. 547, 1116 (2001)
- ONAKA, T. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- ONG, R. A. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- OPPENHEIMER, B. D. The Approaching Death of the OH/IR Star IRAS 18455+0448. B. M. Lewis, B. D. Oppenheimer, & I. J. Daubar. 548, L77 (2001)
- ORLANDINI, M. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- OROSZ, JEROME A. Optical Observations of the Black Hole Candidate XTE J1550-564 during Reflare and Quiescence. Raj K. Jain, Charles D. Bailyn, Jerome A. Orosz, Jeffrey E. McClintock, Gregory J. Sobczak, & Ronald A. Remillard. 546, 1086 (2001)
- ORTEGA-RODRIGUEZ, MANUEL. Relativistic Diskoseismology. II. Analytical Results for c-Modes. Alexander S. Silbergleit, Robert V. Wagoner, & Manuel Ortega-Rodriguez. 548, 335 (2001)
- ORTH, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- OSER, S. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment. S. Oser, D. Bhattacharya, L. M. Boone, M. C. Chantrell, Z. Conner, C. E. Couvaut, M. Dragovan, P. Fortin, D. T. Gregorich, D. S. Hanna, R. Mukherjee, R. A. Ong, K. Ragan, R. A. Scalzo, D. R. Schuette, C. G. Theoret, T. O. Turner, D. A. Williams, & J. A. Zweerink. 547, 949 (2001)
- OSMER, P. Production of  $^2\text{H}$ ,  $^3\text{He}$ , and  $^7\text{Li}$  from Interactions between Jets and Clouds. M. Famiiano, J. Vandegriff, R. N. Boyd, T. Kajino, & P. Osmer. 547, L21 (2001)
- OSTERIA, G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- OSTRIKER, EVE C. Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models. Eve C. Ostriker, James M. Stone, & Charles F. Gammie. 546, 980 (2001)
- OUCHIRIF, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- OZEKI, HIROYUKI. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2$ - $^3P_1$  Line toward the Orion Kleinmann-Low Region.
- PACHECO, R. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- PACIESAS, WILLIAM S. See MITROFANOV, IGOR G., et al. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts.
- PADILLA, L. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- PADOAN, PAOLO. The Effects of Noise and Sampling on the Spectral Correlation Function. Paolo Padoan, Erik W. Rosolowsky, & Alyssa A. Goodman. 547, 862 (2001)
- PAERELS, FRITS. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091. Frits Paerels, A. C. Brinkman, R. L. J. van der Meer, J. S. Kaastra, E. Kuulkers, A. J. F. den Boggende, P. Predehl, Jeremy J. Drake, Steven M. Kahn, Daniel W. Savin, & Brendan M. McLaughlin. 546, 338 (2001)
- PAGE, DANY. Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti. 548, L175 (2001)
- PALAMARA, O. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PALAZZI, E. See JAUNSEN, A. O., et al. The Jet and Circumburst Stellar Wind of GRB 980519. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- PALEN, STACY. Polarization and Extent of Maser Emission from Late-Type Stars: Support for a Plasma Turbulence Model of Maser Production. Stacy Palen. 547, L57 (2001)
- PALUNAS, POVILAS. Wide-Field Imaging of the Hubble Deep Field-South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate. 548, 127 (2001)
- PANAGIA, NINO. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- PANTER, M. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- PAPADAKIS, I. E. Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. I. Cagnoni, I. E. Papadakis, & A. Fruscione. 546, 886 (2001)
- PAPALIOLOS, COSTAS. Detection of Earth-like Planets Using Apodized Telescopes. Peter Nisenson & Costas Papaliolos. 548, L201 (2001)
- PAQUE, JULIE M. Size-selective Concentration of Chondrules and Other Small Particles in Protoplanetary Nebula Turbulence. Jeffrey N. Cuzzi, Robert C. Hogan, Julie M. Paque, & Anthony R. Dobrovolskis. 546, 496 (2001)
- PARDO, JUAN R. Infrared Space Observatory's Discovery of  $\text{C}_4\text{H}_2$ ,  $\text{C}_6\text{H}_2$ , and Benzene in CRL 618. José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters. 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618. José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters. 546, L127 (2001)
- PARIEV, V. I. Estimation of Relativistic Accretion Disk Parameters from Iron Line Emission. V. I. Pariev, B. C. Bromley, & W. A. Miller. 547, 649 (2001)
- PARISE, RONALD A. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- PARK, SANGWOOK. ASCA Observation of an "X-Ray Shadow" in the Galactic Plane. Sangwook Park & Ken Ebisawa. 547, 777 (2001)
- PARMAR, A. N. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- PATERA, V. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PATRIZII, L. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PATTEN, B. M. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- PATTON, D. R. See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- PAUL, B. Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan. 546, 1075 (2001)
- Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan. 548, 368 (2001)
- PAUL, J. The SIGMA/Granat Telescope: Calibration and Data Reduction. L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul. 548, 990 (2001)
- PAULINY-TOH, I. I. K. VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth. 547, 714 (2001)
- PAZZI, R. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PECK, C. W. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PEDERSEN, H. See JAUNSEN, A. O., et al. The Jet and Circumburst Stellar Wind of GRB 980519.
- PELETIER, REYNIER F. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- PEN, UE-LI. Gravitational Lensing by Galaxy Groups in the Hubble Deep Field. David C. Fox & Ue-Li Pen. 546, 35 (2001)
- PENDLETON, GEOFFREY N. See MITROFANOV, IGOR G., et al. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts.
- PENG, C. Y. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- PENG, RUIHENG. The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida. 547, 311 (2001)
- PENNY, LAURA R. Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini).

- Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper. 548, 889 (2001)
- PERLMAN, E. Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- PEROLA, G. C. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- PERRONE, L. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PERROTTA, F. Implications for Quintessence Models from MAXIMA-1 and BOOMERANG-98. *A. Balbi, C. Baccigalupi, S. Matarrese, F. Perrotta, & N. Vittorio*. 547, L89 (2001)
- PETER, H. See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- PETERSON, RUTH C. Hot Horizontal-Branch Stars in the Galactic Bulge. *I. Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker*. 547, 240 (2001)
- PETRE, R. The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre*. 547, 1034 (2001)
- PETREIRA, S. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PETRY, CATHY. Radio-quiet Quasars in the Direction of the Northern Hubble Deep Field. *Chris Impey & Cathy Petry*. 547, 117 (2001)
- PETTINI, MAX. Lyman-Continuum Emission from Galaxies at  $z \approx 3.4$ . *Charles C. Steidel, Max Pettini, & Kurt L. Adelberger*. 546, 665 (2001)
- Where Are the Absorbers toward Q2302+029? *David V. Bowen, Raul Jimenez, Edward B. Jenkins, & Max Pettini*. 547, 39 (2001)
- PFÄHL, ERIC. The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport*. 546, 455 (2001)
- PHILLIPS, M. M. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- PHILLIPS, NICHOLAS G. Statistical Power, the Bispectrum, and the Search for Non-Gaussianity in the Cosmic Microwave Background Anisotropy. *Nicholas G. Phillips & A. Kogut*. 548, 540 (2001)
- PHILLIPS, THOMAS G. The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. *Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida*. 547, 311 (2001)
- PIAN, E. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- PICCIRILLO, L. Millimetric Ground-based Observation of CMBR Anisotropy at  $\delta = +28^\circ$ . *G. Romeo, S. Ali, B. Femenia, M. Limon, L. Piccirillo, & R. Rebolo*. 548, L1 (2001)
- PIER, JEFFREY R. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- PINSONNEAULT, MARC. Disk Locking and the Presence of Slow Rotators among Solar-Type Stars in Young Star Clusters. *Sydney Barnes, Sabatino Sofia, & Marc Pinsonneault*. 548, 1071 (2001)
- PIOTTO, G. Star Counts across the Red Giant Branch Bump and Below. *G. Bono, S. Cassisi, M. Zoccali, & G. Piotto*. 546, L109 (2001)
- PIRAN, TSVI. A Model of Void Formation. *Yasmin Friedmann & Tsvi Piran*. 548, 1 (2001)
- Neutron Stars with a Stable, Light Supersymmetric Baryon. *Shmuel Balberg, Glennys R. Farrar, & Tsvi Piran*. 548, L179 (2001)
- PIRO, L. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- PIRRONELLO, V. Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali*. 548, L253 (2001)
- PISKUNOV, N. Model Atmospheres with Individualized Abundances. *N. Piskunov & F. Kupka*. 547, 1040 (2001)
- PISTILLI, P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- PIVOVAROFF, MICHAEL J. The Central X-Ray Point Source in Cassiopeia A. *Depto Chakraborty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan*. 548, 800 (2001)
- PIZZELLA, A. Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger*. 546, 903 (2001)
- PIZZOLATO, N. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- PLAGA, R. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- PLUCINSKY, PAUL P. RJX 0852.0-0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2-1.2). *Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach*. 548, 814 (2001)
- PLUNKETT, S. P. Observation of Polar Plumes at High Solar Altitudes. *C. E. DeForest, S. P. Plunkett, & M. D. Andrews*. 546, 569 (2001)
- PLYASHESNIKOV, A. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- POGGE, RICHARD W. Spatial/Spectral Resolution of a Galactic Bulge K3 Giant Stellar Atmosphere via Gravitational Microlensing. *Sandra Castro, Richard W. Pogge, R. Michael Rich, D. L. DePoy, & Andrew Gould*. 548, L197 (2001)
- POGOSYAN, DMITRY. Fast Cosmic Microwave Background Analyses via Correlation Functions. *István Szapudi, Simon Prunet, Dmitry Pogosyan, Alexander S. Szalay, & J. Richard Bond*. 548, L115 (2001)
- PONMAN, T. J. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- POOLEY, D. Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748-288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin*. 546, 1055 (2001)
- POPA, V. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- POPHAM, ROBERT. Accretion Disk Boundary Layers around Neutron Stars: X-Ray Production in Low-Mass X-Ray Binaries. *Robert Popham & Rashid Sunyaev*. 547, 355 (2001)
- PORCIANI, CRISTIANO. On the Association of Gamma-Ray Bursts with Massive Stars: Implications for Number Counts and Lensing Statistics. *Cristiano Porciani & Piero Madau*. 548, 522 (2001)
- PORTEGIES ZWART, S. F. Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe*. 547, 345 (2001)
- PORTEGIES ZWART, SIMON F. How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut*. 546, L101 (2001)
- POSSENTI, A. Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo*. 548, L171 (2001)
- See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- POSSENTI, ANDREA. Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti*. 548, L175 (2001)
- POSTMAN, MARC. Observational Constraints on Higher Order Clustering up to  $z \approx 1$ . *István Szapudi, Marc Postman, Tod R. Lauer, & William Oegerle*. 548, 114 (2001)
- PRAHL, J. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- PRAVDO, S. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- PREDDEHL, P. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091.
- PREECE, ROBERT D. See MITROFANOV, IGOR G., et al. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts.
- PRICE, TREVOR. The Intrinsic Absorber in QSO 2359-1241: *KECK* and *Hubble Space Telescope* Observations. *Nahum Arav, Michael S. Brotherton, Robert H. Becker, Michael D. Gregg, Richard L. White, Trevor Price, & Warren Hack*. 546, 140 (2001)
- KECK HIRES* Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. *Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista*. 548, 609 (2001)



- PRIETO, CARLOS ALLENDE. An Empirical Procedure to Estimate Distances to Stellar Clusters. *Carlos Allende Prieto*. 547, 200 (2001)
- PRINCE, T. A. Single-Pulse Characteristics of the Millisecond Radio Pulsar PSR B1937+21 at 430 MHz. *F. A. Jenet, S. B. Anderson, & T. A. Prince*. 546, 394 (2001)
- PROFFITT, CHARLES R. Boron Abundances in Early B Stars: Results from the B III Resonance Line in IUE Data. *Charles R. Proffitt & Mark F. Quigley*. 548, 429 (2001)
- PRUNET, SIMON. Fast Cosmic Microwave Background Analyses via Correlation Functions. *István Szapudi, Simon Prunet, Dmitry Pogosyan, Alexander S. Szalay, & J. Richard Bond*. 548, L115 (2001)
- PRZYBILLA, N. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- PRZYBILLA, NORBERT. Stellar Spectroscopy Far beyond the Local Group. *Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla*. 548, L159 (2001)
- PUŠKIN, VLADIMIR. The Modified Weighted Slab Technique: Models and Results. *Frank C. Jones, Andrew Lukasiak, Vladimir Puskin, & William Webber*. 547, 264 (2001)
- PÜHLHOFER, G. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- PUERARI, IVANIO. Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villaminar, Iloracio Dottori, Ivanio Puerari, & Reinaldo de Carvalho*. 547, 187 (2001)
- PUN, C. S. J. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- QI, C. Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with Infrared Space Observatory LWS Observations. *E. I. Chiang, M. K. Jung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck*. 547, 1077 (2001)
- QIU, YULEI. A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu*. 546, 734 (2001)
- QUI, H. M. The Abundance Patterns of Sirius and Vega. *H. M. Qui, G. Zhao, Y. Q. Chen, & Z. W. Li*. 548, 953 (2001)
- QUIGLEY, MARK F. Boron Abundances in Early B Stars: Results from the B III Resonance Line in IUE Data. *Charles R. Proffitt & Mark F. Quigley*. 548, 429 (2001)
- QUILLEN, A. C. NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen*. 546, 952 (2001)
- The Multitude of Unresolved Continuum Sources at 1.6 Microns in Hubble Space Telescope Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke*. 547, 129 (2001)
- QUINN, T. The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake*. 547, 555 (2001)
- QUINN, THOMAS. Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake*. 547, L123 (2001)
- RABELLO-SOARES, M. C. Energy Distribution of Solar Oscillation Modes Inferred from Space-based Measurements. *M. F. Woodard, S. G. Korzenik, M. C. Rabello-Soares, P. Kumar, T. D. Tarbell, & S. Action*. 548, L103 (2001)
- RABINOWITZ, D. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- RAFIKOV, R. R. Constraints on Cold H<sub>2</sub> Clouds from Gravitational Microlensing Searches. *R. R. Rafikov & B. T. Draine*. 547, 207 (2001)
- RAGA, A. C. Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). *L. López-Martín, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto*. 548, 288 (2001)
- RAGAN, K. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- RAGOT, B. R. Magnetic Field-Line Wandering and Shock Front Acceleration: Application to the Radio Emission of SN 1987A. *B. R. Ragot*. 547, 1010 (2001)
- RAGUNI, G. Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali*. 548, L253 (2001)
- RAINÓ, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- RAKOWSKI, CARA E. Two New Ejecta-dominated Galactic Supernova Remnants: G337.2-0.7 and G309.2-0.6. *Cara E. Rakowski, John P. Hughes, & Patrick Slane*. 548, 258 (2001)
- RAMESH, R. Low-Frequency Radio Observations of the Angular Broadening of the Crab Nebula Due to a Coronal Mass Ejection. *R. Ramesh, C. Kathiravan, & Ch. V. Sastry*. 548, L229 (2001)
- RAMSEY, BRIAN D. Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey*. 546, L91 (2001)
- RANDALL, SCOTT W. The Contribution of Extreme Ultraviolet from Clusters of Galaxies to the Cosmic Ionizing Background. *Scott W. Randall & Craig L. Sarazin*. 548, 60 (2001)
- RANSOM, SCOTT M. A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne*. 546, L25 (2001)
- RAO, A. R. Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. *S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan*. 546, 1075 (2001)
- Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan*. 548, 368 (2001)
- RAPPAPORT, SAUL A. The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport*. 546, 455 (2001)
- RASIO, FREDERIC A. Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren*. 548, 323 (2001)
- RAULIN, J. P. Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer*. 548, L95 (2001)
- RAYMOND, JOHN. Balmer-dominated Spectra of Nonradiative Shocks in the Cygnus Loop, RCW 86, and Tycho Supernova Remnants. *Parviz Ghavamian, John Raymond, R. Chris Smith, & Patrick Hartigan*. 547, 995 (2001)
- RAYMOND, JOHN C. Does the Mass Accretion Rate Depend on the Radius of the Accreting Star? *Abraham Loeb, Ramesh Narayan, & John C. Raymond*. 547, L151 (2001)
- REACH, W. T. Near-Infrared Imaging and O I Spectroscopy of IC 443 Using 2MASS and Infrared Space Observatory. *Jeonghee Rho, T. H. Jarrett, R. M. Cutri, & W. T. Reach*. 547, 885 (2001)
- REAMES, D. V. Heavy Ion Abundances and Spectra and the Large Gradual Solar Energetic Particle Event of 2000 July 14. *D. V. Reames, C. K. Ng, & A. J. Tylka*. 548, L233 (2001)
- REBOLO, R. Millimetric Ground-based Observation of CMBR Anisotropy at  $\delta = +28^\circ$ . *G. Romeo, S. Ali, B. Femenia, M. Limon, L. Piccirillo, & R. Rebolo*. 548, L1 (2001)
- REHM, K. E. Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Mathieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee*. 548, 1051 (2001)
- REINSCH, K. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- REIPURTH, BO. Irradiated Herbig-Haro Jets in the Orion Nebula and near NGC 1333. *John Bally & Bo Reipurth*. 546, 299 (2001)
- REMILLARD, RONALD A. Optical Observations of the Black Hole Candidate XTE J1550-564 during Reflare and Quiescence. *Raj K. Jain, Charles D. Bailyn, Jerome A. Orosz, Jeffrey E. McClintock, Gregory J. Sobczak, & Ronald A. Remillard*. 546, 1086 (2001)
- RENGSTORF, A. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- RENGSTORF, A. W. See SABBAY, C. N., et al. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- RESSLER, M. E. Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. *K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler*. 548, 861 (2001)

- REUTER, D. C. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- REYES-RUIZ, M. The Magnetorotational Instability across the Dead Zone of Protoplanetary Disks. *M. Reyes-Ruiz*. 547, 465 (2001)
- REYNOLDS, CHRISTOPHER S. Simulations of Accretion Flows Crossing the Last Stable Orbit. *Philip J. Armitage, Christopher S. Reynolds, & James Chiang*. 548, 868 (2001)
- REYNOLDS, R. J. Detection of N II  $\lambda$ 5755 Emission from Low-Density Ionized Interstellar Gas. *R. J. Reynolds, N. C. Sterling, L. M. Haffner, & S. L. Tufie*. 548, L221 (2001)
- REYNOLDS, STEPHEN P. Supernova Remnants in the Sedov Expansion Phase: Thermal X-Ray Emission. *Kazimierz J. Borkowski, William J. Lyerly, & Stephen P. Reynolds*. 548, 820 (2001)
- REYNOLDS, J. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- RHO, JEONGHEE. Near-Infrared Imaging and O I Spectroscopy of IC 443 Using 2MASS and Infrared Space Observatory. *Jeonghee Rho, T. H. Jarrett, R. M. Cutri, & W. T. Reach*. 547, 885 (2001)
- RHOADS, JAMES E. The Near-Infrared and Multiwavelength Afterglow of GRB 000301C. *James E. Rhoads & Andrew S. Fruchter*. 546, 117 (2001)
- RHODE, W. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- RIBAS, IGNASI. The Best Brown Dwarf Yet? A Companion to the Hyades Eclipsing Binary V471 Tauri. *Edward F. Guinan & Ignasi Ribas*. 546, L43 (2001)
- RICH, R. MICHAEL. Spatial/Spectral Resolution of a Galactic Bulge K3 Giant Stellar Atmosphere via Gravitational Microlensing. *Sandra Castro, Richard W. Pogge, R. Michael Rich, D. L. DePoy, & Andrew Gould*. 548, L197 (2001)
- RICHARDS, E. A. The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger*. 548, L147 (2001)
- RICHARDS, GORDON T. Quasar Absorption Lines as a Function of Quasar Orientation Measures. *Gordon T. Richards, S. A. Laurent-Muehleisen, Robert H. Becker, & Donald G. York*. 547, 635 (2001)
- RICKER, G. R. See CUI, WEI, et al. Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942.
- RIDDLE, R. L. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- RIEKE, G. H. NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen*. 546, 952 (2001)
- The Multitude of Unresolved Continuum Sources at 1.6 Microns in *Hubble Space Telescope* Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke*. 547, 129 (2001)
- RIEKE, M. J. NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen*. 546, 952 (2001)
- The Multitude of Unresolved Continuum Sources at 1.6 Microns in *Hubble Space Telescope* Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke*. 547, 129 (2001)
- RIESS, ADAM G. Monte Carlo Simulations of Type Ia Supernova Observations in Supernova Surveys. *Weidong Li, Alexei V. Filippenko, & Adam G. Riess*. 546, 719 (2001)
- A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu*. 546, 734 (2001)
- RIX, H.-W. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- RIX, HANS-WALTER. The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. *Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent*. 546, 205 (2001)
- See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- RIZZO, J. R. Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodriguez-Fernandez, & A. Fuente*. 548, L65 (2001)
- ROBBA, N. R. Study of the Temporal Behavior of 4U 1728–34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba*. 546, 1107 (2001)
- A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba*. 547, 412 (2001)
- Probing the Inner Region of Cygnus X-1 in the Low/Hard State through Its X-Ray Broadband Spectrum. *T. Di Salvo, C. Done, P. T. Zycki, L. Burderi, & N. R. Robba*. 547, 1024 (2001)
- A Hard Tail in the Broadband Spectrum of the Dipper XB 1254–690. *R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba*. 548, 883 (2001)
- ROBERT, CARMELLE. Physical Parameters of Erupting Luminous Blue Variables: NGC 2363–V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier*. 546, 484 (2001)
- ROBERTS, MORTON S. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- ROCKOSI, CONSTANCE M. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- RODGERS, S. D. Chemical Differentiation in Regions of Massive Star Formation. *S. D. Rodgers & S. B. Charnley*. 546, 324 (2001)
- RODRÍGUEZ, L. F. See CUI, WEI, et al. Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942.
- RODRÍGUEZ-FERNÁNDEZ, N. J. Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodriguez-Fernandez, & A. Fuente*. 548, L65 (2001)
- RODRÍGUEZ-GIL, PABLO. Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi. *Pablo Rodriguez-Gil, Jorge Casares, Ignacio G. Martinez-Pais, Pasi Hakala, & Danny Steeghs*. 548, L49 (2001)
- RODRÍGUEZ HIDALGO, INÉS. Lagrangian and Eulerian Stratifications of Acoustic Oscillations through the Solar Photosphere. *Inés Rodríguez Hidalgo, Basilio Ruiz Cobo, Manuel Collados, & Luis R. Bellot Rubio*. 547, 491 (2001)
- ROHRING, A. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- ROELLIG, T. L. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- ROL, E. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- ROMEO, G. Millimetric Ground-based Observation of CMBR Anisotropy at  $\delta = +28^\circ$ . *G. Romeo, S. Ali, B. Femenia, M. Limon, L. Piccirillo, & R. Rebolo*. 548, L1 (2001)
- ROMER, A. KATHY. A Serendipitous Galaxy Cluster Survey with XMM: Expected Catalog Properties and Scientific Applications. *A. Kathy Romer, Pedro T. P. Viana, Andrew R. Liddle, & Robert G. Mann*. 547, 594 (2001)
- RONGA, F. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- ROOS, MATTS. Smooth Energy: Cosmological Constant or Quintessence? *Sidney Bludman & Matts Roos*. 547, 77 (2001)
- ROQUES, J. P. The SIGMA/Granat Telescope: Calibration and Data Reduction. *L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul*. 548, 990 (2001)
- ROSENBERG, L. J. A Radio Telescope Search for Axions. *B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu*. 546, 825 (2001)
- ROSENTHAL, C. S. See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- ROSENZWEIG, P. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- ROSER, J. E. Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali*. 548, L253 (2001)
- ROSOLANKOVA, KATARINA. Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? *Sean G. Ryan, Timothy C. Beers, Toshihiko Kajino, & Katarina Rosolankova*. 547, 231 (2001)
- ROSOLOWSKY, ERIK W. The Effects of Noise and Sampling on the Spectral Correlation Function. *Paolo Padoan, Erik W. Rosolowsky, & Alyssa A. Goodman*. 547, 862 (2001)

- ROTHSCHILD, R. E. Does Pulsar B1757-24 Have a Fallback Disk? *D. Marsden, R. E. Lindegren, & R. E. Rothschild*. 547, L45 (2001)
- ROTHSCHILD, RICHARD E. High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Tails in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber*. 547, L147 (2001)
- ROTS, A. H. See KAARET, P., et al. *Chandra* Observations of the Young Pulsar PSR B0540-69.
- ROWELL, G. P. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- ROY, JEAN-RENÉ. Physical Parameters of Erupting Luminous Blue Variables: NGC 2363-V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier*. 546, 484 (2001)
- RUIZ, MARIA TERESA. The Luminosity Function of Magnitude and Proper-Motion-selected Samples: The Case of White Dwarfs. *René A. Méndez & María Teresa Ruiz*. 547, 252 (2001)
- RUIZ COBO, B. Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich*. 547, 1130 (2001)
- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet*. 547, 1148 (2001)
- RUIZ COBO, BASILIO. Lagrangian and Eulerian Stratifications of Acoustic Oscillations through the Solar Photosphere. *Inés Rodríguez Hidalgo, Basilio Ruiz Cobo, Manuel Collados, & Luis R. Bellot Rubio*. 547, 491 (2001)
- RYAN, ERIN. New Optical Constraints on the Presence of a Compact Central Object in Cassiopeia A. *Erin Ryan, R. Mark Wagner, & Sumner G. Starrfield*. 548, 811 (2001)
- RYAN, SEAN G. Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? *Sean G. Ryan, Timothy C. Beers, Toshitaka Kajino, & Katarina Rosolankova*. 517, 231 (2001)
- RYDE, FELIX. On the Hardness-Intensity Correlation in Gamma-Ray Burst Pulses. *Luis Borgonovo & Felix Ryde*. 548, 770 (2001)
- RYDE, N. Modeling CO Emission from Mira's Wind. *N. Ryde & F. L. Schöier*. 547, 384 (2001)
- RYDEN, BARBARA S. The Size and Shape of Voids in Three-dimensional Galaxy Surveys. *Jason D. Schmidt, Barbara S. Ryden, & Adrian L. Melott*. 546, 609 (2001)
- SABBEY, C. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SABBEY, C. N. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ . *C. N. Sabbey, A. Oemler, P. Coppi, C. Baltay, A. Bongiovanni, G. Bruzual, C. E. Garcia, J. Musser, A. W. Renzetti, & J. A. Snyder*. 548, 585 (2001)
- SADLER, ELAINE M. Hot Horizontal-Branch Stars in the Galactic Bulge. I. *Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker*. 547, 240 (2001)
- SAHAKIAN, V. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- SAHO, MOTOYUKI. Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. *Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro*. 548, 919 (2001)
- SAITO, GAKU. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- SAITO, M. An H $^{13}$ CO $^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada*. 547, 840 (2001)
- SAITO, MASAO. Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe*. 548, 278 (2001)
- SAITO, SHUJI. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- SAKAI, TAKESHI. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- SAKO, MASAO. The X-Ray Photoionized Wind in Cen X-3/779 Cen. *Patrick S. Wójcowski, Duane A. Liedahl, & Masao Sako*. 547, 973 (2001)
- SAKURAI, T. Spatial Structure of Simple Spiky Bursts at Microwave/Millimeter Wavelengths. *M. R. Kundu, S. M. White, K. Shibasaki, T. Sakurai, & V. V. Grechnev*. 547, 1090 (2001)
- SALIM, S. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SALMONSON, JAY D. On the Kinematics of GRB 980425 and Its Association with SN 1998bw. *Jay D. Salmonson*. 546, L29 (2001)
- SAMBRUNA, RITA M. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L13 (2001)
- SAMORSKI, M. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- SANCHEZ, GE. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SANCHEZ, GU. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SANDELL, GÖRAN. NGC 1333-Protostars, Dust Shells, and Triggered Star Formation. *Göran Sandell & Lewis B. G. Kneel*. 546, L49 (2001)
- SANDFORD, S. A. The Abundances of Solid N $_2$  and Gaseous CO $_2$  in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira*. 548, 836 (2001)
- SANIN, ANTON B. See MITROFANOV, IGOR G., et al. Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts.
- SANTANGELO, A. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- SANZ, M. E. The Cyclic C $_3$ H Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus*. 547, L65 (2001)
- SARAZIN, CRAIG L. The Contribution of Extreme Ultraviolet from Clusters of Galaxies to the Cosmic Ionizing Background. *Scott W. Randall & Craig L. Sarazin*. 548, 60 (2001)
- Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey. *Joshua C. Kempner & Craig L. Sarazin*. 548, 639 (2001)
- SARGENT, W. L. W. Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent*. 548, 592 (2001)
- SARGENT, WALLACE L. W. The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. *Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent*. 546, 205 (2001)
- SARI, RE'EM. On the Synchrotron Self-Compton Emission from Relativistic Shocks and Its Implications for Gamma-Ray Burst Afterglows. *Re'em Sari & Ann A. Esin*. 548, 787 (2001)
- SASTRY, CH. V. Low-Frequency Radio Observations of the Angular Broadening of the Crab Nebula Due to a Coronal Mass Ejection. *R. Ramesh, C. Kathiravan, & Ch. V. Sastry*. 548, L229 (2001)
- SATRIANO, C. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SATTA, L. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SAVAGE, BLAIR D. STIS and GHRS Observations of Warm and Hot Gas Overlying the Sctum Supershell (GS 018-04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk*. 547, 907 (2001)
- SAVAGLIO, S. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- SAVIN, DANIEL W. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091.
- SAWANT, H. S. Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Sawant, & J. A. C. F. Neri*. 548, L87 (2001)
- SAWICKI, M. See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- SCALZO, R. A. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- SCAPPARONE, E. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.



- SCHACHTER, J. F. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- SCHAEFER, B. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SCHARF, C. Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- SCHENNER, H. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SCHILIZZI, R. T. VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . *A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth*. 547, 714 (2001)
- SCHILLING, M. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- SCHLEGEL, E. M. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- SCHLOERB, F. PETER. Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub*. 546, 358 (2001)
- SCHMIDT, BRIAN. See LENTZ, ERIC J., et al. Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- SCHMIDT, GARY D. Time-resolved *Hubble Space Telescope* Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman*. 548, 410 (2001)
- SCHMIDT, JASON D. The Size and Shape of Voids in Three-dimensional Galaxy Surveys. *Jason D. Schmidt, Barbara S. Ryden, & Adrian L. Melott*. 546, 609 (2001)
- SCHÖIER, F. L. Modeling CO Emission from Mira's Wind. *N. Ryde & F. L. Schöier*. 547, 384 (2001)
- SCHOLBERG, K. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SCHRIJVER, CAROLUS J. Simulations of the Photospheric Magnetic Activity and Outer Atmospheric Radiative Losses of Cool Stars Based on Characteristics of the Solar Magnetic Field. *Carolus J. Schrijver*. 547, 475 (2001)
- On the Evolution of the Solar Photospheric and Coronal Magnetic Field. *Brian N. Handy & Carolus J. Schrijver*. 547, 1100 (2001)
- SCHRÖDER, F. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- SCHÜHLE, U. Properties of Solar Polar Coronal Hole Plasmas Observed above the Limb. *G. A. Doschek, U. Feldman, J. M. Laming, U. Schühle, & K. Wilhelm*. 546, 559 (2001)
- SCHUETTE, D. R. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- SCHULTE-LADBECK, R. E. Tailored Analyses of the WN 8 Stars WR 40 and WR 16. *J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck*. 548, 932 (2001)
- SCHULZ, N. S. See KAARET, P., et al. *Chandra* Observations of the Young Pulsar PSR B0540–69.
- See Cui, Wei, et al. Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942.
- SCHWEITZER, ANDREAS. Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschildt, & Andreas Schweitzer*. 548, 908 (2001)
- SCIORTINO, S. See HARNDEN, F. R., JR., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- SCIUBBA, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SCOCIMMARRO, ROMÁN. How Many Galaxies Fit in a Halo? Constraints on Galaxy Formation Efficiency from Spatial Clustering. *Román Scoccimmarro, Ravi K. Sheth, Lam Hui, & Bhuvnesh Jain*. 546, 20 (2001)
- The Bispectrum of IRAS Redshift Catalogs. *Román Scoccimmarro, Hume A. Feldman, J. N. Fry, & Joshua A. Frieman*. 546, 652 (2001)
- SECCO, C. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SEETHA, S. Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. *S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan*. 546, 1075 (2001)
- Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan*. 548, 368 (2001)
- SEGRETO, A. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.
- SEIGAR, MARC. *Hubble Space Telescope* Optical–Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe*. 546, 216 (2001)
- SEKIMOTO, YUTARO. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2$ – $^3P_1$  Line toward the Orion Kleinmann–Low Region.
- SELLWOOD, J. A. The Stability of Disks in Cusped Potentials. *J. A. Sellwood & N. W. Evans*. 546, 176 (2001)
- The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood*. 546, 916 (2001)
- The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid-Dynamical Models. *Benjamin J. Weiner, J. A. Sellwood, & T. B. Williams*. 546, 931 (2001)
- SEMBACH, KENNETH R. STIS and GHRS Observations of Warm and Hot Gas Overlying the Sctum Supershell (GS 018–04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk*. 547, 907 (2001)
- SERLEMITOS, P. J. Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by *Chandra* in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky*. 546, 759 (2001)
- SERRA, P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SEVENSTER, MAARTJE N. A Shock-excited OH Maser in a Post-Asymptotic Giant Branch Envelope? *Maartje N. Sevenster & Jessica M. Chapman*. 546, L119 (2001)
- SEWARD, F. D. See KAARET, P., et al. *Chandra* Observations of the Young Pulsar PSR B0540–69.
- SEYLE, DEBRA. Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper*. 548, 889 (2001)
- SHAKED, SHANNA. The Multitude of Unresolved Continuum Sources at 1.6 Microns in *Hubble Space Telescope* Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke*. 547, 129 (2001)
- SHANG, HSIEN. The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. *Frank H. Shu, Hsien Shang, Mathieu Gounelle, Alfred E. Glassgold, & Typhoon Lee*. 548, 1029 (2001)
- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Mathieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee*. 548, 1051 (2001)
- SHAPIRO, PAUL R. On the Origin of the Rotation Curves of Dark Matter-dominated Galaxies. *Ilian T. Iliev & Paul R. Shapiro*. 546, L5 (2001)
- SHAPIRO, STUART L. Evolution of Differentially Rotating Supermassive Stars to the Onset of Bar Instability. *Kimberly C. B. New & Stuart L. Shapiro*. 548, 439 (2001)
- Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. *Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro*. 548, 919 (2001)
- SHAW, RICHARD A. Morphology and Evolution of the Large Magellanic Cloud Planetary Nebulae. *Richard A. Shaw, Letizia Stanghellini, Max Mutchler, Bruce Balick, & J. Chris Blades*. 548, 727 (2001)
- SHEARER, ANDY. Implications of the Optical Observations of Isolated Neutron Stars. *Andy Shearer & Aaron Golden*. 547, 967 (2001)
- SHEELEY, N. R., JR. Coronal Inflows and the Sun's Nonaxisymmetric Open Flux. *N. R. Sheeley, Jr., T. N. Knudson, & Y.-M. Wang*. 546, L131 (2001)
- SHENOY, S. S. Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface. *D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy*. 547, 872 (2001)
- SHEPHERD, D. S. Warm Dust Emission near W75 N IRS1: Evidence for Multiple Energetic Outflows. *D. S. Shepherd*. 546, 345 (2001)
- SHETH, RAVI K. How Many Galaxies Fit in a Halo? Constraints on Galaxy Formation Efficiency from Spatial Clustering. *Román Scoccimmarro, Ravi K. Sheth, Lam Hui, & Bhuvnesh Jain*. 546, 20 (2001)

- SHETRONE, MATTHEW D. Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent*. 548, 592 (2001)
- SHI, SHENG-CAI. See YAMAMOTO, SATOSHI, et al. Observation of the C i  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region.
- SHIBAI, H. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- SHIBASAKI, K. Spatial Structure of Simple Spiky Bursts at Microwave/Millimeter Wavelengths. *M. R. Kundu, S. M. White, K. Shibasaki, T. Sakurai, & V. V. Grechnev*. 547, 1090 (2001)
- SHIBATA, KAZUNARI. Magnetic Reconnection Induced by Convective Intensification of Solar Photospheric Magnetic Fields. *Akitsugu Takeuchi & Kazunari Shibata*. 546, L73 (2001)
- SHIBATA, MASARU. Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. *Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro*. 548, 919 (2001)
- SHIMURA, TOSHIYA. Broadband Spectral Energy Distributions of Active Galactic Nuclei from an Accretion Disk with Advective Coronal Flow. *Toshihiro Kawaguchi, Toshiya Shimura, & Shin Mineshige*. 546, 966 (2001)
- SHIN, J. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SHIOYA, YASUHIRO. A New Interpretation of Chain Galaxies at High Redshift. *Yoshiaki Taniguchi & Yasuhiro Shioya*. 547, 146 (2001)
- Formation and Evolution of E+A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch*. 547, L17 (2001)
- On the Hidden Nuclear Starburst in Arp 220. *Yasuhiro Shioya, Neil Trentham, & Yoshiaki Taniguchi*. 548, L29 (2001)
- SHOPBELL, P. L. Chandra X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell*. 547, 740 (2001)
- SHORT, C. IAN. Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschildt, S. Starrfield, & E. Baron*. 547, 1057 (2001)
- SHU, FRANK H. The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. *Frank H. Shu, Hsien Shang, Matthieu Gounelle, Alfred E. Glassgold, & Tiphon Lee*. 548, 1029 (2001)
- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Matthieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Tiphon Lee*. 548, 1051 (2001)
- SHUKLA, P. K. Instabilities in a Nonuniform Partially Ionized Isothermal Magnetoplasma. *A. A. Mamun & P. K. Shukla*. 548, 269 (2001)
- SHUPING, R. Y. A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr*. 547, L161 (2001)
- SIEMIGINOWSKA, A. See CAPPI, M., et al. Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- SIEMIGINOWSKA, ANETA. Accretion Disk Instabilities, Cold Dark Matter Models, and Their Role in Quasar Evolution. *Evanthia Hatziminaoglou, Aneta Siemiginowska, & Martin Elvis*. 547, 90 (2001)
- Analysis of Energy Spectra with Low Photon Counts via Bayesian Posterior Simulation. *David A. van Dyk, Alanna Connors, Vinay L. Kashyap, & Aneta Siemiginowska*. 548, 224 (2001)
- SIEMS, M. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- SIGUT, T. A. A. The Origin of Mn II Emission in the Spectra of Chemically Peculiar Stars. *T. A. A. Sigut*. 546, L115 (2001)
- SILBERGLEIT, ALEXANDER S. Relativistic Diskoseismology. II. Analytical Results for c-Modes. *Alexander S. Silbergleit, Robert V. Wagoner, & Manuel Ortega-Rodríguez*. 548, 335 (2001)
- SILLS, ALISON. Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sils, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren*. 548, 323 (2001)
- SILVA, A. V. R. Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer*. 548, L95 (2001)
- SIOLI, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SITTA, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SKILLMAN, E. D. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- SKRUTSKIE, M. F. Periodic Photometric Variability in the Becklin-Neugebauer Object. *Lynne A. Hillenbrand, John M. Carpenter, & M. F. Skrutskie*. 547, L53 (2001)
- SKUMANICH, A. Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich*. 547, 1130 (2001)
- SLANE, PATRICK. Two New Ejecta-dominated Galactic Supernova Remnants: G337.2-0.7 and G309.2-0.6. *Cara E. Rakowski, John P. Hughes, & Patrick Slane*. 548, 258 (2001)
- RJX 0852.0-0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2-1.2). *Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach*. 548, 814 (2001)
- SMARTT, S. J. See VENN, K. A., et al. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy.
- SMITH, A. M. Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cherie L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth*. 546, 866 (2001)
- SMITH, ADAM A. On the Use of Correlations to Determine the Motions and Properties of Mesoscale Magnetic Features in the Solar Photosphere. *Herschel B. Snodgrass & Adam A. Smith*. 546, 528 (2001)
- SMITH, ANDREW M. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631. *Andrew M. Smith, Nicholas R. Collins, William H. Waller, Morton S. Roberts, Denise A. Smith, Ralph C. Bohlin, K.-P. Cheng, Michael N. Fanelli, Susan G. Neff, Robert W. O'Connell, Ronald A. Parise, Eric P. Smith, & Theodore P. Stecher*. 546, 829 (2001)
- SMITH, DENISE A. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- SMITH, ERIC P. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- SMITH, LINDA J. Physical Parameters of Erupting Luminous Blue Variables: NGC 2363-V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier*. 546, 484 (2001)
- SMITH, R. CHRIS. Balmer-dominated Spectra of Nonradiative Shocks in the Cygnus Loop, RCW 86, and Tycho Supernova Remnants. *Parviz Ghavamian, John Raymond, R. Chris Smith, & Patrick Hartigan*. 547, 995 (2001)
- SMITH, RANDALL. Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin*. 548, L81 (2001)
- SNODGRASS, HERSCHEL B. On the Use of Correlations to Determine the Motions and Properties of Mesoscale Magnetic Features in the Solar Photosphere. *Herschel B. Snodgrass & Adam A. Smith*. 546, 528 (2001)
- SNOW, THEODORE P. A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr*. 547, L161 (2001)
- Reactions of  $C_n^-$  and  $C_nH^-$  with Atomic and Molecular Hydrogen. *Cynthia Barckholtz, Theodore P. Snow, & Veronica M. Bierbaum*. 547, L171 (2001)
- SNOWDEN, S. L. X-Ray Constraints on the Warm-Hot Intergalactic Medium. *K. D. Kuntz, S. L. Snowden, & R. F. Mushotzky*. 548, L119 (2001)
- SNYDER, J. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SNYDER, J. A. See SABBAY, C. N., et al. The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ .
- SOBCZAK, GREGORY J. Optical Observations of the Black Hole Candidate XTE J1550-564 during Reflare and Quiescence. *Raj K. Jain, Charles D. Bailyn, Jerome A. Orosz, Jeffrey E. McClintock, Gregory J. Sobczak, & Ronald A. Remillard*. 546, 1086 (2001)
- SOFIA, S. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SOFIA, SABATINO. Disk Locking and the Presence of Slow Rotators among Solar-Type Stars in Young Star Clusters. *Sydney Barnes, Sabatino Sofia, & Marc Pinsonneault*. 548, 1071 (2001)
- SOFUE, Y. Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin*. 547, L115 (2001)

- SOLANES, JOSE M. The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes.* 548, 97 (2001)
- SONG, INSEOK. Ages of A-Type Vega-like Stars from *uvby* Photometry. *Inseok Song, J.-P. Caillaud, David Barrado y Navascués, & John R. Stauffer.* 546, 352 (2001)
- SONG, M. T. Exact Solutions for Two-dimensional Steady Magnetic Reconnection in Partially Ionized Plasmas. *H. S. Ji, M. T. Song, & G. L. Huang.* 548, 1087 (2001)
- SONNEBORN, GEORGE. See LENTZ, ERIC J., et al. Analysis of the Type II SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- SORENSEN, P. M. See JAUNSEN, A. O., et al. The Jet and Circumburst Stellar Wind of GRB 980519.
- SPAANS, MARCO. The Abundance and Emission of H<sub>2</sub>O and O<sub>2</sub> in Clumpy Molecular Clouds. *Marco Spaans & Ewine F. van Dishoeck.* 548, L217 (2001)
- SPADARO, DANIELE. Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiochos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane.* 547, 1116 (2001)
- SPAVIERI, G. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- SPIEGEL, DAVID N. Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt.* 547, 574 (2001)
- SPIECER, DANIEL S. Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiochos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane.* 547, 1116 (2001)
- SPINELLI, P. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SPINETTI, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SPINOGLIO, LUIGI. A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio.* 547, 292 (2001)
- SPINRAD, HYRON. Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad.* 547, 667 (2001)
- SPIROCK, TOM. Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang.* 548, 497 (2001)
- SPRUIT, H. C. Circumbinary Disks and Cataclysmic Variable Evolution. *H. C. Spruit & Ronald E. Taam.* 548, 900 (2001)
- SPURIO, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- STADEL, J. The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake.* 547, 555 (2001)
- STADEL, JOACHIM. Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)
- STAGGS, S. T. A Limit on the Polarized Anisotropy of the Cosmic Microwave Background at Subdegree Angular Scales. *M. M. Hedman, D. Barkats, J. O. Gundersen, S. T. Staggs, & B. Winstein.* 548, L111 (2001)
- STAIRS, I. H. See CAMILO, F., et al. Discovery of Five Binary Radio Pulsars.
- STAMM, W. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- STANGHELLINI, LETIZIA. Morphology and Evolution of the Large Magellanic Cloud Planetary Nebulae. *Richard A. Shaw, Letizia Stanghellini, Max Mutchler, Bruce Balick, & J. Chris Blades.* 548, 727 (2001)
- STAPPERS, B. W. Intrinsic and Reprocessed Optical Emission from the Companion to PSR J2051–0827. *B. W. Stappers, M. H. van Kerkwijk, J. F. Bell, & S. R. Kulkarni.* 548, L183 (2001)
- STARK, ANTHONY A. See OJHA, ROOPESH, et al. AST/RO Observations of Atomic Carbon near the Galactic Center.
- STARRFIELD, S. Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschildt, S. Starrfield, & E. Baron.* 547, 1057 (2001)
- STARRFIELD, SUMNER G. New Optical Constraints on the Presence of a Compact Central Object in Cassiopeia A. *Erin Ryan, R. Mark Wagner, & Sumner G. Starrfield.* 548, 811 (2001)
- STAUFFER, J. See HARNDEN, F. R., JR., et al. Chandra Observations of the Open Cluster NGC 2516.
- STAUFFER, JOHN R. Ages of A-Type Vega-like Stars from *uvby* Photometry. *Inseok Song, J.-P. Caillaud, David Barrado y Navascués, & John R. Stauffer.* 546, 352 (2001)
- From the Top to the Bottom of the Main Sequence: A Complete Mass Function of the Young Open Cluster M35. *David Barrado y Navascués, John R. Stauffer, Jerome Bouvier, & Eduardo L. Martin.* 546, 1006 (2001)
- STAVELEY-SMITH, LISTER. A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungeun Kim, & Lister Staveley-Smith.* 548, 749 (2001)
- STECHER, THEODORE P. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- STEEGHS, DANNY. Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi. *Pablo Rodríguez-Gil, Jorge Casares, Ignacio G. Martínez-Pais, Pasi Hakala, & Danny Steeghs.* 548, L49 (2001)
- STEIDEL, CHARLES C. Lyman-Continuum Emission from Galaxies at  $z \approx 3.4$ . *Charles C. Steidel, Max Pettini, & Kurt L. Adelberger.* 546, 665 (2001)
- STEIN, R. F. Solar Oscillations and Convection. I. Formalism for Radial Oscillations. *Å. Nordlund & R. F. Stein.* 546, 576 (2001)
- Solar Oscillations and Convection. II. Excitation of Radial Oscillations. *R. F. Stein & Å. Nordlund.* 546, 585 (2001)
- STEINBERG, R. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- STEINHARDT, PAUL J. Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt.* 547, 574 (2001)
- A Simple Method for Computing the Nonlinear Mass Correlation Function with Implications for Stable Clustering. *Robert R. Caldwell, Roman Juszkiewicz, Paul J. Steinhardt, & Francois R. Bouchet.* 547, L93 (2001)
- STERLING, N. C. Detection of N II  $\lambda 5755$  Emission from Low-Density Ionized Interstellar Gas. *R. J. Reynolds, N. C. Sterling, L. M. Haffner, & S. L. Tufte.* 548, L221 (2001)
- STETSON, PETER B. Supernova 1991T and the Value of the Hubble Constant. *Brad K. Gibson & Peter B. Stetson.* 547, L103 (2001)
- STIAVELLI, MASSIMO. Hubble Space Telescope Optical–Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe.* 546, 216 (2001)
- STOCK, J. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- STOCKMAN, H. S. Time-resolved Hubble Space Telescope Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman.* 548, 410 (2001)
- STOLDT, C. R. Vibrational Spectra of Hydrogenated Buckminsterfullerene: A Candidate for the Unidentified Infrared Emission. *C. R. Stoldt, R. Maboudian, & C. Carraro.* 548, L225 (2001)
- STOLTE, ANDREA. Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte.* 547, L133 (2001)
- See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- STONE, J. L. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- STONE, JAMES M. Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models. *Eve C. Ostriker, James M. Stone, & Charles F. Gammie.* 546, 980 (2001)
- STORRIE-LOMBARDI, LISA J. Star Formation History in the NICMOS Northern Hubble Deep Field. *Rodger I. Thompson, Ray J. Weymann, & Lisa J. Storrie-Lombardi.* 546, 694 (2001)
- STOUGHTON, CHRIS. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- STROM, RICHARD G. The Radio Structure of the Supernova Remnant G315.4–2.3 (MSH 14–63). *John R. Dickel, Richard G. Strom, & D. K. Milne.* 546, 447 (2001)



- STURROCK, PETER A. Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson*. 548, 492 (2001)
- STUTZ, AMELIA. A Method to Measure the Ratio of Total to Selective Extinction toward Baade's Window. *Andrew Gould, Amelia Stutz, & Jay A. Frogel*. 547, 590 (2001)
- SUGIYAMA, NAOSHI. Nonlinear Evolution of Very Small Scale Cosmological Baryon Perturbations at Recombination. *Guo-Chin Liu, Kazuhiro Yamamoto, Naoshi Sugiyama, & Hiroaki Nishioka*. 547, 1 (2001)
- SUH, IN-SAENG. Cold Ideal Equation of State for Strongly Magnetized Neutron-Star Matter: Effects on Muon Production and Pion Condensation. *In-Saeng Suh & G. J. Mathews*. 546, 1126 (2001)
- SULAK, L. R. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SULKANEN, MARTIN E. Are There Advection-dominated Accretion Flows in Nearby Giant Elliptical Galaxies? *Martin E. Sulkanen & Joel N. Bregman*. 548, L131 (2001)
- SUNADA, K. An  $H^{13}CO^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada*. 547, 840 (2001)
- SUNTZEFF, N. B. See LENTZ, ERIC J., et al. Analysis of the Type II In SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- SUNYAEV, RASHID. Accretion Disk Boundary Layers around Neutron Stars: X-Ray Production in Low-Mass X-Ray Binaries. *Robert Popham & Rashid Sunyaev*. 547, 355 (2001)
- SURDO, A. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- SUSPERREGI, MIKEL. Breaking the Degeneracy of Cosmological Parameters in Galaxy Redshift Surveys. *Mikel Susperregi*. 546, 85 (2001)
- SUTO, YASUSHI. Superclustering of Faint Galaxies in the Field of a QSO Concentration at  $z \sim 1.1$ . *Ichir Tanaka, Toru Yamada, Edwin L. Turner, & Yasushi Suto*. 547, 521 (2001)
- SWANK, J. H. The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre*. 547, 1034 (2001)
- SWARTZ, DOUGLAS A. Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey*. 546, L91 (2001)
- SZALAY, ALEXANDER S. Fast Cosmic Microwave Background Analyses via Correlation Functions. *István Szapudi, Simon Prunet, Dmitry Pogosyan, Alexander S. Szalay, & J. Richard Bond*. 548, L115 (2001)
- SZAPUDI, ISTVÁN. Observational Constraints on Higher Order Clustering up to  $z \approx 1$ . *István Szapudi, Marc Postman, Tod R. Lauer, & William Oegerle*. 548, 114 (2001)
- Fast Cosmic Microwave Background Analyses via Correlation Functions. *István Szapudi, Simon Prunet, Dmitry Pogosyan, Alexander S. Szalay, & J. Richard Bond*. 548, L115 (2001)
- TAAM, RONALD E. Circumbinary Disks and Cataclysmic Variable Evolution. *H. C. Spruit & Ronald E. Taam*. 548, 900 (2001)
- TAKADA, MASAHIRO. Detectability of the Gravitational Lensing Effect on the Two-Point Correlation Function of Hot Spots in Cosmic Microwave Background Maps. *Masahiro Takada & Toshifumi Futamase*. 546, 620 (2001)
- TAKEUCHI, AKITSUGU. Magnetic Reconnection Induced by Convective Intensification of Solar Photospheric Magnetic Fields. *Akitsugu Takeuchi & Kazunari Shibata*. 546, L73 (2001)
- TANABÉ, T. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- TANAKA, ICHI. A Rich Cluster of Galaxies near the Quasar B2 1335+28 at  $z = 1.1$ : Color Distribution and Star Formation Properties: Erratum. *Ichir Tanaka, Toru Yamada, Alfonso Aragón-Salamanca, Tadayuki Kodama, Takamitsu Miyaji, Kouji Ohta, & Nobuo Arimoto*. 546, 604 (2001) (Orig. paper in 528, 123 (2000))
- Superclustering of Faint Galaxies in the Field of a QSO Concentration at  $z \sim 1.1$ . *Ichir Tanaka, Toru Yamada, Edwin L. Turner, & Yasushi Suto*. 547, 521 (2001)
- TANANBAUM, H. See CAPPI, M., et al. Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- TANIGUCHI, YOSHIKI. The Narrow-Line Region of Seyfert Galaxies: Narrow-Line Seyfert 1 Galaxies versus Broad-Line Seyfert 1 Galaxies. *Tohru Nagao, Takashi Murayama, & Yoshiaki Taniguchi*. 546, 744 (2001)
- A New Interpretation of Chain Galaxies at High Redshift. *Yoshiaki Taniguchi & Yasuhiro Shioya*. 547, 146 (2001)
- LRG J0239–0134: A Ring Galaxy or a Pair of Superbubbles at  $z = 1$ ? *Yoshiaki Taniguchi & Takashi Murayama*. 547, L13 (2001)
- SIO Emission in the Multilobe Outflow Associated with IRAS 16293–2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi*. 547, 899 (2001)
- On the Hidden Nuclear Starburst in Arp 220. *Yasuhiro Shioya, Neil Trentham, & Yoshiaki Taniguchi*. 548, L29 (2001)
- TARBELL, T. D. Energy Distribution of Solar Oscillation Modes Inferred from Space-based Measurements. *M. F. Woodard, S. G. Korzenik, M. C. Rabello-Soares, P. Kumar, T. D. Tarbell, & S. Action*. 548, L103 (2001)
- See MCINTOSH, S. W., et al. An Observational Manifestation of Magnetospheric Waves in Internetwork Regions of the Chromosphere and Transition Region.
- TARLE, G. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- TASHIRO, M. X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). *M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda*. 546, L19 (2001)
- Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. *A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro*. 547, L119 (2001)
- TATEKAWA, TAKAYUKI. Primordial Fractal Density Perturbations and Structure Formation in the Universe: One-dimensional Collisionless Sheet Model. *Takayuki Tatakawa & Kei-ichi Maeda*. 547, 531 (2001)
- TATEMATSU, KEN'ICHI. See YAMAMOTO, SATOSHI, et al. Observation of the  $C\ I\ ^3P_{2-3}P_1$  Line toward the Orion Kleinmann-Low Region.
- TAYLOR, S. C. See CUI, WEI, et al. Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942.
- TEIXEIRA, T. C. V. S. The Abundances of Solid  $N_2$  and Gaseous  $CO_2$  in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira*. 548, 836 (2001)
- TELLES, EDUARDO. High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle*. 548, 671 (2001)
- TENORIO-TAGLE, GUILLERMO. High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle*. 548, 671 (2001)
- TEPLITZ, H. I. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- TEPLITZ, HARRY I. Wide-Field Imaging of the Hubble Deep Field-South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate*. 548, 127 (2001)
- TERNDROP, DONALD M. Hot Horizontal-Branch Stars in the Galactic Bulge. I. *Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker*. 547, 240 (2001)
- THADDEUS, P. The Cyclic  $C_5H$  Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus*. 547, L65 (2001)
- The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus*. 547, 792 (2001)
- THALLER, M. L. Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper*. 548, 889 (2001)
- THEORET, C. G. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- THOMPSON, RODGER I. Star Formation History in the NICMOS Northern Hubble Deep Field. *Rodger I. Thompson, Ray J. Weymann, & Lisa J. Storrie-Lombardi*. 546, 694 (2001)
- TIELENS, A. G. G. M. Infrared Space Observatory's Discovery of  $C_4H_2$ ,  $C_6H_2$ , and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters*. 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters*. 546, L127 (2001)

- TINGAY, S. J. Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. *S. J. Tingay & D. W. Murphy*. 546, 210 (2001)
- TLUCZYKONT, M. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- TOGO, V. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- TOMSICK, JOHN A. The X-Ray Properties of Low-Frequency Quasi-periodic Oscillations from GRS 1915+105 up to 120 keV. *John A. Tomsick & Philip Kaaret*. 548, 401 (2001)
- TONRY, JOHN L. The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- TOZZI, PAOLO. The Evolution of X-Ray Clusters and the Entropy of the Intracluster Medium. *Paolo Tozzi & Colin Norman*. 546, 63 (2001)
- TRAN, HIEN D. QSO 2359–1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack*. 546, 134 (2001)
- Composite Spectra from the FIRST Bright Quasar Survey. *M. S. Brotherton, Hien D. Tran, R. H. Becker, Michael D. Gregg, S. A. Laurent-Muehleisen, & R. L. White*. 546, 775 (2001)
- TRAUB, WESLEY A. Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub*. 546, 358 (2001)
- TRAVAGLIO, CLAUDIA. Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of *r*-Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert*. 547, 217 (2001)
- TREFFERS, RICHARD R. A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu*. 546, 734 (2001)
- TRENTHAM, NEIL. On the Hidden Nuclear Starburst in Arp 220. *Yasuhiro Shioya, Neil Trentham, & Yoshiaki Taniguchi*. 548, L29 (2001)
- TREVES, A. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with BeppoSAX.
- TREVES, ALDO. Near-Infrared Imaging of the Host Galaxies of Three Radio-loud Quasars at  $z \sim 1.5$ . *Renato Falomo, Jari Kotilainen, & Aldo Treves*. 547, 124 (2001)
- TRIFOGLIO, M. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with BeppoSAX.
- TSUNEMI, HIROSHI. RXJ 0852.0–0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2–1.2). *Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach*. 548, 814 (2001)
- TSURU, T. G. Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the Chandra High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe*. 547, L25 (2001)
- TUFTE, S. L. Detection of N II  $\lambda$ 5755 Emission from Low-Density Ionized Interstellar Gas. *R. J. Reynolds, N. C. Sterling, L. M. Haffner, & S. L. Tufte*. 548, L221 (2001)
- TUMER, T. O. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- TURNER, EDWIN L. Superclustering of Faint Galaxies in the Field of a QSO Concentration at  $z \sim 1.1$ . *Ichi Tanaka, Toru Yamada, Edwin L. Turner, & Yasushi Suto*. 547, 521 (2001)
- TURNER, T. J. Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky*. 546, 759 (2001)
- Chandra Grating Spectroscopy of the Seyfert Galaxy Ton S180. *T. J. Turner, I. M. George, T. Yaqoob, G. Kriss, D. M. Crenshaw, S. Kraemer, W. Zheng, J. Wang, & K. Nandra*. 548, L13 (2001)
- TYLKA, A. J. Heavy Ion Abundances and Spectra and the Large Gradual Solar Energetic Particle Event of 2000 July 14. *D. V. Reames, C. K. Ng, & A. J. Tylka*. 548, L233 (2001)
- UETA, TOSHIYA. Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman*. 548, 1020 (2001)
- UMEDA, HIDEYUKI. Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto*. 547, 988 (2001)
- UMEMOTO, TOMOFUMI. SiO Emission in the Multilobe Outflow Associated with IRAS 16293–2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi*. 547, 899 (2001)
- UMEMURA, MASAYUKI. On the Initial Mass Function of Population III Stars. *Fumitaka Nakamura & Masayuki Umemura*. 548, 19 (2001)
- VAKILI, M. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- VALINIA, AZITA. RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky*. 547, 722 (2001)
- VALOTTO, CARLOS A. Do Clusters Contain a Large Population of Dwarf Galaxies? *Carlos A. Valotto, Ben Moore, & Diego G. Lambas*. 546, 157 (2001)
- VAN ALTENA, W. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- VAN BREUGEL, WIL. Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad*. 547, 667 (2001)
- VANDEGRIFF, J. Production of  $^2\text{H}$ ,  $^3\text{He}$ , and  $^7\text{Li}$  from Interactions between Jets and Clouds. *M. Fumiano, J. Vandegriff, R. N. Boyd, T. Kajino, & P. Osmer*. 547, L21 (2001)
- VAN DEN HEUVEL, E. P. J. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- VAN DER KLIS, M. Study of the Temporal Behavior of 4U 1728–34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba*. 546, 1107 (2001)
- VAN DER MEER, R. L. J. See PAERELS, FRITS, et al. Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the Chandra LETGS Spectrum of X0614+091.
- VAN DISHOECK, E. F. Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with Infrared Space Observatory LWS Observations. *E. I. Chiang, M. K. Jung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck*. 547, 1077 (2001)
- VAN DISHOECK, EWINE F. The Abundance and Emission of H<sub>2</sub>O and O<sub>2</sub> in Clumpy Molecular Clouds. *Marco Spaans & Ewine F. van Dishoeck*. 548, L217 (2001)
- VAN DYK, DAVID A. Analysis of Energy Spectra with Low Photon Counts via Bayesian Posterior Simulation. *David A. van Dyk, Allana Connors, Vinay L. Kashyap, & Aneta Siemiginowska*. 548, 224 (2001)
- VAN GORKOM, J. H. The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood*. 546, 916 (2001)
- VAN KERKWIJK, M. H. Intrinsic and Reprocessed Optical Emission from the Companion to PSR J2051–0827. *B. W. Stappers, M. H. van Kerkwijk, J. F. Bell, & S. R. Kulkarni*. 548, L183 (2001)
- VAN LOON, JACCO TH. Supersonic Water Masers in 30 Doradus. *Jacco Th. van Loon & Albert A. Zijlstra*. 547, L61 (2001)
- VAN PARADJUS, J. See VREESWIJK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- VATS, HARI OM. Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Sawant, & J. A. C. F. Neri*. 548, L87 (2001)
- VAUGHAN, SIMON. Evidence for Rapid Iron K $\alpha$  Line Flux Variability in MGC –6-30-15. *Simon Vaughan & Rick Edelson*. 548, 694 (2001)
- VELLI, MARCO. Plasmoid Formation and Acceleration in the Solar Streamer Belt. *Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli*. 547, 1167 (2001)
- VENN, K. A. First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy. *K. A. Venn, D. J. Lennon, A. Kaufer, J. K. McCarthy, N. Przybilla, R. P. Kudritzki, M. Lemke, E. D. Skillman, & S. J. Smartt*. 547, 765 (2001)

- VERA-VILLAMIZAR, NELSON. Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)
- VERDUGO, EVA. New Constraints on Protostellar Jet Collimation from High-Density Gas UV Tracers. *Ana I. Gómez de Castro & Eva Verdugo.* 548, 976 (2001)
- VERGNE, M. MARCELA. On the Effect of Chaotic Orbits on Dynamical Friction. *Sofia A. Cora, M. Marcela Vergne, & Juan C. Muzzio.* 546, 165 (2001)
- VEROLME, E. K. See DAVIES, ROGER L., et al. Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365.
- VIANA, PEDRO T. P. A Serendipitous Galaxy Cluster Survey with XMM: Expected Catalog Properties and Scientific Applications. *A. Kathy Romer, Pedro T. P. Viana, Andrew R. Liddle, & Robert G. Mann.* 547, 594 (2001)
- VICENTE, B. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- VIDALI, G. Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali.* 548, L253 (2001)
- VIEIRA, GLADYS. Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia.* 547, L155 (2001)
- VIEIRA, K. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- VIKHLININ, A. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- VIKHLININ, A. A. See MUÑOZ, J. A., et al. Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529.
- VILELA, E. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- VINÑAS, A. Constraints on the  $O^{+5}$  Anisotropy in the Solar Corona. *L. Ofman, A. Vinñas, & S. P. Gary.* 547, L175 (2001)
- VIRANI, S. See CAPPI, M., et al. *Chandra* Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- VITTORIO, N. Implications for Quintessence Models from MAXIMA-1 and BOOMERANG-98. *A. Balbi, C. Baccigalupi, S. Matarrese, F. Perrotta, & N. Vittorio.* 547, L89 (2001)
- VIVAS, K. See FERRIN, IGNACIO, et al. Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>.
- VÖLK, H. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- VOIT, G. MARK. Confusion of Diffuse Objects in the X-Ray Sky. *G. Mark Voit, August E. Evrard, & Greg L. Bryan.* 548, L123 (2001)
- VOURLIDAS, A. Deriving the Electron Density of the Solar Corona from the Inversion of Total Brightness Measurements. *A. P. Hayes, A. Vourlidas, & R. A. Howard.* 548, 1081 (2001)
- VREESWIJK, P. M. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population. *P. M. Vreeswijk, A. Fruchter, L. Kaper, E. Rol, T. J. Galama, J. van Paradijs, C. Kouveliotou, R. A. M. J. Wijers, E. Pian, E. Palazzi, N. Masetti, F. Frontera, S. Savaglio, K. Reinsch, F. V. Hessman, K. Beuermann, H. Nicklas, & E. P. J. van den Heuvel.* 546, 672 (2001)
- WADA, KEIICHI. Numerical Models of the Multiphase Interstellar Matter with Stellar Energy Feedback on a Galactic Scale. *Keiichi Wada & Colin A. Norman.* 547, 172 (2001)
- WADSLEY, JAMES. Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)
- WAGNER, R. MARK. New Optical Constraints on the Presence of a Compact Central Object in Cassiopeia A. *Erin Ryan, R. Mark Wagner, & Sumner G. Starrfield.* 548, 811 (2001)
- WAGONER, ROBERT V. Relativistic Diskoseismology. II. Analytical Results for c-Modes. *Alexander S. Silbergleit, Robert V. Wagoner, & Manuel Ortega-Rodríguez.* 548, 335 (2001)
- WALBORN, NOLAN R. Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia.* 547, L155 (2001)
- WALDRON, WAYNE L. *Chandra* Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis. *Wayne L. Waldron & Joseph P. Cassinelli.* 548, L45 (2001)
- WALKER, ALISTAIR R. Hot Horizontal-Branch Stars in the Galactic Bulge. I. *Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker.* 547, 240 (2001)
- WALLACE, D. J. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- WALLER, WILLIAM H. See SMITH, ANDREW M., et al. Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631.
- WALTER, C. W. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.
- WANDELT, BENJAMIN D. Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt.* 547, 574 (2001)
- WANG, HAIMIN. A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang.* 547, L85 (2001)
- Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang.* 548, 497 (2001)
- WANG, J. See TURNER, T. J., et al. *Chandra* Grating Spectroscopy of the Seyfert Galaxy Ton S180.
- WANG, JINGXIU. Magnetic Flux Cancellation Associated with the Major Solar Event on 2000 July 14. *Jun Zhang, Jingxiu Wang, & Yuanyong Deng.* 548, L99 (2001)
- WANG, L. See LENTZ, ERIC J., et al. Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- WANG, S. A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon.* 547, 1159 (2001)
- WANG, X. Y. Prompt High-Energy Gamma-Ray Emission from Synchrotron Self-Compton Process in the Reverse Shocks of Gamma-Ray Bursts. *X. Y. Wang, Z. G. Dai, & T. Lu.* 546, L33 (2001)
- A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon.* 547, 1159 (2001)
- WANG, Y.-M. Coronal Inflows and the Sun's Nonaxisymmetric Open Flux. *N. R. Sheeley, Jr., T. N. Knudson, & Y.-M. Wang.* 546, L131 (2001)
- WARD-THOMPSON, D. Measurement of the Magnetic Field Direction in the NGC 2024 FIR 5 Protostellar Outflow. *J. S. Greaves, W. S. Holand, & D. Ward-Thompson.* 546, L53 (2001)
- An Empirical Model for Protostellar Collapse. *A. P. Whitworth & D. Ward-Thompson.* 547, 317 (2001)
- WARGELIN, BRADFORD J. Observability of Stellar Winds from Late-Type Dwarfs via Charge Exchange X-Ray Emission. *Bradford J. Wargelin & Jeremy J. Drake.* 546, L57 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoeder, Randall Smith, & Bradford J. Wargelin.* 548, L81 (2001)
- WARREN, AARON R. Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren.* 548, 323 (2001)
- WATERS, L. B. F. M. Infrared Space Observatory's Discovery of C<sub>4</sub>H<sub>2</sub>, C<sub>6</sub>H<sub>2</sub>, and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters.* 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters.* 546, L127 (2001)
- WAXMAN, ELI. On the Energy of Gamma-Ray Bursts. *Deborah L. Freedman & Eli Waxman.* 547, 922 (2001)
- WEAVER, K. A. X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L13 (2001)
- WEBB, R. See AMBROSIO, M., et al. Neutrino Astronomy with the MACRO Detector.



- WEBBER, WILLIAM. The Modified Weighted Slab Technique: Models and Results. *Frank C. Jones, Andrew Lukasiak, Vladimir Pustkin, & William Webber*. 547, 264 (2001)
- WEBER, MARK. Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson*. 548, 492 (2001)
- WEINBERG, DAVID H. Quasar Clustering and the Lifetime of Quasars. *Paul Martini & David H. Weinberg*. 547, 12 (2001)
- Hierarchical Galaxy Formation and Substructure in the Galaxy's Stellar Halo. *James S. Bullock, Andrey V. Kravtsov, & David H. Weinberg*. 548, 33 (2001)
- WEINBERG, MARTIN D. Structure of the Large Magellanic Cloud from 2MASS. *Martin D. Weinberg & Sergei Nikolaev*. 548, 712 (2001)
- WEINBERG, NEVIN. Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. *Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb*. 546, 1098 (2001)
- WEINER, BENJAMIN J. The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood*. 546, 916 (2001)
- The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid-Dynamical Models. *Benjamin J. Weiner, J. A. Sellwood, & T. B. Williams*. 546, 931 (2001)
- WEINGARTNER, JOSEPH C. Dust Grain-Size Distributions and Extinction in the Milky Way, Large Magellanic Cloud, and Small Magellanic Cloud. *Joseph C. Weingartner & B. T. Draine*. 548, 296 (2001)
- WEINTRAUB, DAVID A. Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn*. 546, 279 (2001)
- WELCH, CARL. Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae. *Eric G. Blackman, Adam Frank, & Carl Welch*. 546, 288 (2001)
- WEN, LINQING. The Correlated Intensity and Spectral Evolution of Cygnus X-1 during State Transitions. *Linqing Wen, Wei Cui, & Hale V. Bradt*. 546, L105 (2001)
- WESTENDORP PLAZA, C. Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich*. 547, 1130 (2001)
- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet*. 547, 1148 (2001)
- WEYMANN, RAY J. Star Formation History in the NICMOS Northern Hubble Deep Field. *Rodger I. Thompson, Ray J. Weymann, & Lisa J. Storrie-Lombardi*. 546, 694 (2001)
- WHEATLAND, MICHAEL S. Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson*. 548, 492 (2001)
- WHEELER, J. C. See LINTZ, ERIC J., et al. Analysis of the Type IIn SN 1998S: Effects of Circumstellar Interaction on Observed Spectra.
- WHITE, MARTIN. The Effect of the Cosmic Web on Cluster Weak Lensing Mass Estimates. *Christopher A. Metzler, Martin White, & Chris Loken*. 547, 560 (2001)
- WHITE, R. L. QSO 2359–1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack*. 546, 134 (2001)
- Composite Spectra from the FIRST Bright Quasar Survey. *M. S. Brotherton, Hien D. Tran, R. H. Becker, Michael D. Gregg, S. A. Laurent-Muehleisen, & R. L. White*. 546, 775 (2001)
- WHITE, RICHARD L. The Intrinsic Absorber in QSO 2359–1241: KECK and Hubble Space Telescope Observations. *Nahum Arav, Michael S. Brotherton, Robert H. Becker, Michael D. Gregg, Richard L. White, Trevor Price, & Warren Hack*. 546, 140 (2001)
- KECK HIRES Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. *Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista*. 548, 609 (2001)
- WHITE, S. M. Spatial Structure of Simple Spiky Bursts at Microwave/Millimeter Wavelengths. *M. R. Kundu, S. M. White, K. Shibasaki, T. Sakurai, & V. V. Grechnev*. 547, 1090 (2001)
- WHITTET, D. C. B. Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface. *D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy*. 547, 872 (2001)
- WHITWORTH, A. P. An Empirical Model for Protostellar Collapse. *A. P. Whitworth & D. Ward-Thompson*. 547, 317 (2001)
- WIECHEN, H. The Critical Velocity Effect as a Cause for the H $\alpha$  Emission from the Magellanic Stream. *C. Konz, H. Lesch, G. T. Birk, & H. Wiechen*. 548, 249 (2001)
- WIEDEMANN, GÜNTHER. A Sensitive Search for Methane in the Infrared Spectrum of  $\tau$  Bootis. *Günter Wiedemann, Drake Deming, & Gordon Bjoraker*. 546, 1068 (2001)
- WIEDNER, C. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.
- WIESE, L. M. Absorption of Ti II Vacuum Ultraviolet Resonance Transitions. *L. M. Wiese, J. A. Fedchak, & J. E. Lawler*. 547, 1178 (2001)
- WIJERS, R. A. M. J. See VREESWIK, P. M., et al. VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population.
- WIJNANDS, R. Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748–288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin*. 546, 1055 (2001)
- WILCOX, M. K. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- WILHELM, K. Properties of Solar Polar Coronal Hole Plasmas Observed above the Limb. *G. A. Doschek, U. Feldman, J. M. Laming, U. Schühle, & K. Wilhelm*. 546, 559 (2001)
- WILKES, B. See CAPPI, M., et al. Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters.
- WILLIAMS, A. M. Detection of the Faint Companion in the Massive Binary HD 199579. *A. M. Williams, D. R. Gies, W. G. Bagnuolo, Jr., D. H. Berger, P. A. Erling, T. J. Fallon, J. A. Harvin, W. Huang, W. C. Jao, T. S. Josephs, J. P. McFarland, M. V. McSwain, R. L. Riddle, D. J. Wallace, D. W. Wingert, A. W. Fullerton, & C. T. Bolton*. 548, 425 (2001)
- WILLIAMS, BENJAMIN F. WFPC2 Observations of Massive and Compact Young Star Clusters in M31. *Benjamin F. Williams & Paul W. Hodge*. 548, 190 (2001)
- WILLIAMS, D. A. See OSER, S., et al. High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment.
- WILLIAMS, T. B. The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood*. 546, 916 (2001)
- The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid-Dynamical Models. *Benjamin J. Weiner, J. A. Sellwood, & T. B. Williams*. 546, 931 (2001)
- WILLICK, JEFFREY A. A Determination of the Hubble Constant from Cepheid Distances and a Model of the Local Peculiar Velocity Field. *Jeffrey A. Willick & Puneet Batra*. 548, 564 (2001)
- WILLS, BEVERLEY J. Heavy X-Ray Absorption in Soft X-Ray-Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyomoto*. 546, 795 (2001)
- WILSON, A. S. Chandra X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell*. 547, 740 (2001)
- WILSON, G. The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger*. 548, L147 (2001)
- WINDHORST, ROGIER A. The Kuiper Belt and Olbers's Paradox. *Scott J. Kenyon & Rogier A. Windhorst*. 547, L69 (2001)
- WINGERT, D. W. See WILLIAMS, A. M., et al. Detection of the Faint Companion in the Massive Binary HD 199579.
- WINGET, D. E. The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models. *M. H. Montgomery, T. S. Metcalfe, & D. E. Winget*. 548, L53 (2001)
- WINSTEIN, B. A Limit on the Polarized Anisotropy of the Cosmic Microwave Background at Subdegree Angular Scales. *M. M. Hedman, D. Barkats, J. O. Gundersen, S. T. Staggs, & B. Winstein*. 548, L111 (2001)
- WIRTH, G. D. See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- WITTEK, W. See AHARONIAN, F., et al. The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999.

- WOJDOWSKI, PATRICK S. The X-Ray Photoionized Wind in Cen X-3/V779 Cen. *Patrick S. Wojdowski, Duane A. Liedahl, & Masao Sako*. 547, 973 (2001)
- WOLF, CHRISTIAN. See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- WOLFSON, RICHARD. Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson*. 548, 492 (2001)
- WOLK, S. J. See HARNDEN, F. R., Jr., et al. *Chandra* Observations of the Open Cluster NGC 2516.
- WONG, TONY. Observations of a Series of Six Recent Glitches in the Crab Pulsar. *Tony Wong, D. C. Backer, & A. G. Lyne*. 548, 447 (2001)
- WOOD, BRIAN E. Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using *Hubble Space Telescope* Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank*. 547, L49 (2001)
- WOOD, KENNETH. Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. *L. D. Matthews & Kenneth Wood*. 548, 150 (2001)
- WOODARD, M. F. Energy Distribution of Solar Oscillation Modes Inferred from Space-based Measurements. *M. F. Woodard, S. G. Korzenik, M. C. Rabello-Soares, P. Kumar, T. D. Tarbell, & S. Action*. 548, L103 (2001)
- WOODGATE, BRUCE E. Wide-Field Imaging of the Hubble Deep Field-South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate*. 548, 127 (2001)
- WRIGHT, GREGORY A. See OJHA, ROOPESH, et al. AST/RO Observations of Atomic Carbon near the Galactic Center.
- WU, C. S. A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon*. 547, 1159 (2001)
- WU, XIANG-PING. Radial Density and Temperature Profiles of the Intracuster Gas Constructed Jointly from the X-Ray Surface Brightness Measurement and the Universal Density Profile. *Xiang-Ping Wu & Tzihong Chiueh*. 547, 82 (2001)
- WU, YANQIN. Gravity Modes in ZZ Ceti Stars. IV. Amplitude Saturation by Parametric Instability. *Yanqin Wu & Peter Goldreich*. 546, 469 (2001)
- XIE, G. Z. Search for Short Variability Timescale of the GeV Gamma-Ray-loud Blazars. *G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing*. 548, 200 (2001)
- XING, S. Y. Search for Short Variability Timescale of the GeV Gamma-Ray-loud Blazars. *G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing*. 548, 200 (2001)
- XU, LI-HONG. See MUMMA, M. J., et al. A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory.
- YADAV, J. S. Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan*. 548, 368 (2001)
- Disk-Jet Connection in the Microquasar GRS 1915+105 and Infrared and Radio Emission. *J. S. Yadav*. 548, 876 (2001)
- YAMADA, M. Dynamical Effects of Global Thermal Instability in Shock-compressed Gas Slabs. *Yamada & R. Nishi*. 547, 99 (2001)
- YAMADA, TORU. A Rich Cluster of Galaxies near the Quasar B2 1335+28 at  $z = 1.1$ : Color Distribution and Star Formation Properties: Erratum. *Ich Tanaka, Toru Yamada, Alfonso Aragón-Salamanca, Tadayuki Kodama, Takamitsu Miyaji, Kouji Ohta, & Nobuo Arimoto*. 546, 604 (2001) (Orig. paper in 528, 123 (2000))
- Superclustering of Faint Galaxies in the Field of a QSO Concentration at  $z \sim 1.1$ . *Ich Tanaka, Toru Yamada, Edwin L. Turner, & Yasushi Suto*. 547, 521 (2001)
- YAMAMOTO, KAZUHIRO. Nonlinear Evolution of Very Small Scale Cosmological Baryon Perturbations at Recombination. *Guo-Chin Liu, Kazuhiro Yamamoto, Naoshi Sugiyama, & Hiroaki Nishioka*. 547, 1 (2001)
- YAMAMOTO, SATOSHI. Observations of DNC and HN<sup>13</sup>C in Dark Cloud Cores. *Tomoya Hirota, Masafumi Ikeda, & Satoshi Yamamoto*. 547, 814 (2001)
- SiO Emission in the Multilobe Outflow Associated with IRAS 16293-2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi*. 547, 899 (2001)
- Observation of the C i  $^3P_2$ - $^3P_1$  Line toward the Orion Kleinmann-Low Region. *Satoshi Yamamoto, Hiroyuki Maezawa, Masafumi Ikeda, Tetsuya Ito, Tomoharu Oka, Gaku Saito, Mitsuhiro Iwata, Kazuhisa Kamegai, Takeshi Sakai, Yutaro Sekimoto, Ken'ichi Tatematsu, Takashi Noguchi, Sheng-Cai Shi, Yuji Arikawa, Yoshiyuki Aso, Keisuke Miyazawa, Shuji Saito, Hideo Fujiwara, Masatoshi Ohishi, Hiroyuki Ozeki, & Junji Inatani*. 547, L165 (2001)
- YAMAMURA, I. See CHAN, KIN-WING, et al. Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium.
- YAQOUB, T. Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by *Chandra* in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky*. 546, 759 (2001)
- See TURNER, T. J., et al. *Chandra* Grating Spectroscopy of the Seyfert Galaxy Ton S180.
- YASHIRO, S. Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret*. 548, L91 (2001)
- YEE, H. K. C. The Evolution of Population Gradients in Galaxy Clusters: The Butcher-Oemler Effect and Cluster Infall. *E. Ellingson, H. Lin, H. K. C. Yee, & R. G. Carlberg*. 547, 609 (2001)
- See HOEKSTRA, H., et al. Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ .
- YI, INSU. Effects of Luminosity Functions Induced by Relativistic Beaming on the Statistics of Cosmological Gamma-Ray Bursts. *Chunglee Kim, Heon-Young Chang, & Insu Yi*. 548, 532 (2001)
- Y NAVASCUES, DAVID BARRADO. Ages of A-Type Vega-like Stars from *uvby $\beta$*  Photometry. *Inseok Song, J.-P. Caillault, David Barrado y Navascués, & John R. Stauffer*. 546, 352 (2001)
- YOKOYAMA, T. Clear Evidence of Reconnection Inflow of a Solar Flare. *T. Yokoyama, K. Akita, T. Morimoto, K. Inoue, & J. Newmark*. 546, L69 (2001)
- YONEHARA, ATSUNORI. Evidence for a Source Size of Less Than 2000 AU in Quasar 2237+0305. *Atsunori Yonehara*. 548, L127 (2001)
- YOON, PETER H. A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon*. 547, 1159 (2001)
- YORK, DONALD G. Quasar Absorption Lines as a Function of Quasar Orientation Measures. *Gordon T. Richards, S. A. Laurent-Muehleisen, Robert H. Becker, & Donald G. York*. 547, 635 (2001)
- See ODENKIRCHEN, MICHAEL, et al. Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data.
- YOSHIDA, HIROSHIGE. The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. *Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida*. 547, 311 (2001)
- YOSHIDA, SHIJUN.  $r$ -Modes of Neutron Stars with a Solid Crust. *Shijun Yoshida & Umin Lee*. 546, 1121 (2001)
- YOUNG, A. J. *Chandra* X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell*. 547, 740 (2001)
- YOUNG, LISA M. The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux*. 546, L97 (2001)
- YU, D. B. A Radio Telescope Search for Axions. *B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu*. 546, 825 (2001)
- YUN, H. S. A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang*. 547, L85 (2001)
- Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirook, & Haimin Wang*. 548, 497 (2001)
- ZALDARRIAGA, MATIAS. Correlations in the Spatial Power Spectra Inferred from Angular Clustering: Methods and Application to the Automated Plate Measuring Survey. *Daniel J. Eisenstein & Matias Zaldarriaga*. 546, 2 (2001)
- ZANK, GARY P. Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using *Hubble Space Telescope* Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank*. 547, L49 (2001)
- ZDZIARSKI, A. A. See FRONTERA, F., et al. Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*.

- ZEILINGER, W. W. Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger.* 546, 903 (2001)
- ZEJDA, LADISLAV. MHD Equation of State with Relativistic Electrons. *Zhigang Gong, Werner D ppen, & Ladislav Zejda.* 546, 1178 (2001)
- ZHANG, BING. Off-Beam Gamma-Ray Pulsars and Unidentified Egret Sources in the Gould Belt. *Alice K. Harding & Bing Zhang.* 548, L37 (2001)
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- Spatial/Spectral Resolution of a Galactic Bulge K3 Giant Stellar Atmosphere via Gravitational Microlensing. *Sandra Castro, Richard W. Pogge, R. Michael Rich, D. L. DePoy, & Andrew Gould.* 548, L197 (2001)
- COSMOLOGY: LARGE-SCALE STRUCTURE OF THE UNIVERSE**
- Correlations in the Spatial Power Spectra Inferred from Angular Clustering: Methods and Application to the Automated Plate Measuring Survey. *Daniel J. Eisenstein & Matias Zaldarriaga.* 546, 2 (2001)
- How Many Galaxies Fit in a Halo? Constraints on Galaxy Formation Efficiency from Spatial Clustering. *Román Scoccimarro, Ravi K. Sheth, Lam Hui, & Bhuvnesh Jain.* 546, 20 (2001)
- Breaking the Degeneracy of Cosmological Parameters in Galaxy Redshift Surveys. *Mikel Susperregi.* 546, 85 (2001)
- The Size and Shape of Voids in Three-dimensional Galaxy Surveys. *Jason D. Schmidt, Barbara S. Ryden, & Adrian L. Melott.* 546, 609 (2001)
- Detectability of the Gravitational Lensing Effect on the Two-Point Correlation Function of Hot Spots in Cosmic Microwave Background Maps. *Masahiro Takada & Toshifumi Futamase.* 546, 620 (2001)
- The Bispectrum of IRAS Redshift Catalogs. *Roman Scoccimarro, Hume A. Feldman, J. N. Fry, & Joshua A. Frieman.* 546, 652 (2001)
- Lyman-Continuum Emission from Galaxies at  $z \approx 3.4$ . *Charles C. Steidel, Max Pettini, & Kurt L. Adelberger.* 546, 665 (2001)
- The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore.* 546, 681 (2001)
- Decaying Cold Dark Matter Model and Small-Scale Power. *Renyue Cen.* 546, L77 (2001)
- The Metal Enrichment and Temperature of the Intergalactic Medium. *Renyue Cen & Greg L. Bryan.* 546, L81 (2001)
- Nonlinear Evolution of Very Small Scale Cosmological Baryon Perturbations at Recombination. *Guo-Chin Liu, Kazuhiro Yamamoto, Naoshi Sugiyama, & Hiroaki Nishioka.* 547, 1 (2001)
- Quasar Clustering and the Lifetime of Quasars. *Paul Martini & David H. Weinberg.* 547, 12 (2001)
- Constraining the Lifetime of Quasars from Their Spatial Clustering. *Zoltán Haiman & Lam Hui.* 547, 27 (2001)
- Where Are the Absorbers toward Q2302+029? *David V. Bowen, Raul Jimenez, Edward B. Jenkins, & Max Pettini.* 547, 39 (2001)
- Superclustering of Faint Galaxies in the Field of a QSO Concentration at  $z \sim 1.1$ . *Ichir Tanaka, Toru Yamada, Edwin L. Turner, & Yasushi Suto.* 547, 521 (2001)
- Primordial Fractal Density Perturbations and Structure Formation in the Universe: One-dimensional Collisionless Sheet Model. *Takayuki Tatekawa & Kei-ichi Maeda.* 547, 531 (2001)
- Scaling Properties of the Redshift Power Spectrum: Theoretical Models. *Y. P. Jing & G. Börner.* 547, 545 (2001)
- A Model of Void Formation. *Yasmin Friedmann & Tsvi Piran.* 548, 1 (2001)
- Weak Gravitational Lensing Bispectrum. *Asantha Cooray & Wayne Hu.* 548, 7 (2001)
- Nonlinear Gravitational Growth of Large-Scale Structures inside and outside Standard Cosmology. *E. Gaztañaga & J. A. Lobo.* 548, 47 (2001)
- The Contribution of Extreme Ultraviolet from Clusters of Galaxies to the Cosmic Ionizing Background. *Scott W. Randall & Craig L. Sarazin.* 548, 60 (2001)



- Observational Constraints on Higher Order Clustering up to  $z \approx 1$ . *István Szapudi, Marc Postman, Tod R. Lauer, & William Oegerle*. 548, 114 (2001)
- The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ . *C. N. Sabbey, A. Oemler, P. Coppi, C. Baltay, A. Bongiovanni, G. Bruzual, C. E. Garcia, J. Musser, A. W. Rengstorff, & J. A. Snyder*. 548, 585 (2001)
- COSMOLOGY: MISCELLANEOUS**
- The Jet and Circumburst Stellar Wind of GRB 980519. *A. O. Jaunsen, J. Hjorth, G. Björnsson, M. I. Andersen, H. Pedersen, K. Kjærsmo, H. Korhonen, P. M. Sørensen, & E. Palazzi*. 546, 127 (2001)
- Monte Carlo Simulations of Type Ia Supernova Observations in Supernova Surveys. *Weidong Li, Alexei V. Filippenko, & Adam G. Riess*. 546, 719 (2001)
- A Serendipitous Galaxy Cluster Survey with XMM: Expected Catalog Properties and Scientific Applications. *A. Kathy Romer, Pedro T. P. Viana, Andrew R. Liddle, & Robert G. Mann*. 547, 594 (2001)
- COSMOLOGY: OBSERVATIONS**
- Breaking the Degeneracy of Cosmological Parameters in Galaxy Redshift Surveys. *Mikel Susperregi*. 546, 85 (2001)
- Four Measures of the Intracluster Medium Temperature and Their Relation to a Cluster's Dynamical State. *B. F. Mathiesen & A. E. Evrard*. 546, 100 (2001)
- The Jet and Circumburst Stellar Wind of GRB 980519. *A. O. Jaunsen, J. Hjorth, G. Björnsson, M. I. Andersen, H. Pedersen, K. Kjærsmo, H. Korhonen, P. M. Sørensen, & E. Palazzi*. 546, 127 (2001)
- The Bispectrum of IRAS Redshift Catalogs. *Roman Scoccimarro, Hume A. Feldman, J. N. Fry, & Joshua A. Frieman*. 546, 652 (2001)
- VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population. *P. M. Vreeswijk, A. Fruchter, L. Kaper, E. Rol, T. J. Galama, J. van Paradijs, C. Kouveliotou, R. A. M. J. Wijers, E. Pian, E. Palazzi, N. Masetti, F. Frontera, S. Savaglio, K. Reinsch, F. V. Hessman, K. Beuermann, H. Nicklas, & E. P. J. van den Heuvel*. 546, 672 (2001)
- Star Formation History in the NICMOS Northern Hubble Deep Field. *Rodger I. Thompson, Ray J. Weymann, & Lisa J. Storrie-Lombardi*. 546, 694 (2001)
- Constraining the Lifetime of Quasars from Their Spatial Clustering. *Zoltán Haiman & Lam Hui*. 547, 27 (2001)
- The Importance of Einstein Rings. *C. S. Kochanek, C. R. Keeton, & B. A. McLeod*. 547, 50 (2001)
- An Efficient Search for Gravitationally Lensed Radio Lobes. *J. Lehar, A. Buchalter, R. G. McMahon, C. S. Kochanek, & T. W. B. Muxlow*. 547, 60 (2001)
- The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake*. 547, 555 (2001)
- Implications for Quintessence Models from MAXIMA-1 and BOOMERANG-98. *A. Balbi, C. Baccigalupi, S. Matarrese, F. Perrotta, & N. Vittorio*. 547, L89 (2001)
- Evolution of the Internal Dynamics of Galaxy Clusters. *Marisa Girardi & Marino Mezzetti*. 548, 79 (2001)
- Wide-Field Imaging of the Hubble Deep Field—South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate*. 548, 127 (2001)
- Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ . *H. Hoekstra, M. Franz, K. Kuijken, R. G. Carlberg, H. K. C. Yee, H. Lin, S. L. Morris, P. B. Hall, D. R. Patton, M. Sawicki, & G. D. Wirth*. 548, L5 (2001)
- Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- Statistical Power, the Bispectrum, and the Search for Non-Gaussianity in the Cosmic Microwave Background Anisotropy. *Nicholas G. Phillips & A. Kogut*. 548, 540 (2001)
- A Determination of the Hubble Constant from Cepheid Distances and a Model of the Local Peculiar Velocity Field. *Jeffrey A. Willick & Puneet Batra*. 548, 564 (2001)
- A Limit on the Polarized Anisotropy of the Cosmic Microwave Background at Subdegree Angular Scales. *M. M. Hedman, D. Barkats, J. O. Gundersen, S. T. Staggs, & B. Winstein*. 548, L111 (2001)
- X-Ray Constraints on the Warm-Hot Intergalactic Medium. *K. D. Kuntz, S. L. Snowden, & R. F. Mushotzky*. 548, L119 (2001)
- COSMOLOGY: THEORY**
- Correlations in the Spatial Power Spectra Inferred from Angular Clustering: Methods and Application to the Automated Plate Measuring Survey. *Daniel J. Eisenstein & Matias Zaldarriaga*. 546, 2 (2001)
- How Many Galaxies Fit in a Halo? Constraints on Galaxy Formation Efficiency from Spatial Clustering. *Román Scoccimarro, Ravi K. Sheth, Lam Hui, & Bhuvnesh Jain*. 546, 20 (2001)
- Double Lenses. *Giuseppe Bertin & Marco Lombardi*. 546, 47 (2001)
- The Evolution of X-Ray Clusters and the Entropy of the Intracluster Medium. *Paolo Tozzi & Colin Norman*. 546, 63 (2001)
- On the Origin of the Rotation Curves of Dark Matter-dominated Galaxies. *Ilian T. Iliev & Paul R. Shapiro*. 546, L5 (2001)
- The Size and Shape of Voids in Three-dimensional Galaxy Surveys. *Jason D. Schmidt, Barbara S. Ryden, & Adrian L. Melott*. 546, 609 (2001)
- Detectability of the Gravitational Lensing Effect on the Two-Point Correlation Function of Hot Spots in Cosmic Microwave Background Maps. *Masahiro Takada & Toshifumi Futamase*. 546, 620 (2001)
- Primordial Star Formation under Far-Ultraviolet Radiation. *Kazuyuki Omukai*. 546, 635 (2001)
- Decaying Cold Dark Matter Model and Small-Scale Power. *Renyue Cen*. 546, L77 (2001)
- Nonlinear Evolution of Very Small Scale Cosmological Baryon Perturbations at Recombination. *Guo-Chin Liu, Kazuhiro Yamamoto, Naoshi Sugiyama, & Hiroaki Nishioka*. 547, 1 (2001)
- Constraining the Lifetime of Quasars from Their Spatial Clustering. *Zoltán Haiman & Lam Hui*. 547, 27 (2001)
- Smooth Energy: Cosmological Constant or Quintessence? *Sidney Bludman & Mats Roos*. 547, 77 (2001)
- Radial Density and Temperature Profiles of the Intracluster Gas Constructed Jointly from the X-Ray Surface Brightness Measurement and the Universal Density Profile. *Xiang-Ping Wu & Tzihong Chiueh*. 547, 82 (2001)
- Accretion Disk Instabilities, Cold Dark Matter Models, and Their Role in Quasar Evolution. *Evanthia Hatziminaoglou, Aneta Siemiginowska, & Martin Elvis*. 547, 90 (2001)
- Dynamical Effects of Global Thermal Instability in Shock-compressed Gas Slabs. *M. Yamada & R. Nishi*. 547, 99 (2001)
- Primordial Fractal Density Perturbations and Structure Formation in the Universe: One-dimensional Collisionless Sheet Model. *Takayuki Tatekawa & Kei-ichi Maeda*. 547, 531 (2001)
- Scaling Properties of the Redshift Power Spectrum: Theoretical Models. *Y. P. Jing & G. Börner*. 547, 545 (2001)
- The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake*. 547, 555 (2001)
- The Effect of the Cosmic Web on Cluster Weak Lensing Mass Estimates. *Christopher A. Metzler, Martin White, & Chris Loken*. 547, 560 (2001)
- Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt*. 547, 574 (2001)
- Implications for Quintessence Models from MAXIMA-1 and BOOMERANG-98. *A. Balbi, C. Baccigalupi, S. Matarrese, F. Perrotta, & N. Vittorio*. 547, L89 (2001)
- A Simple Method for Computing the Nonlinear Mass Correlation Function with Implications for Stable Clustering. *Robert R. Caldwell, Roman Juszkiewicz, Paul J. Steinhardt, & Francois R. Bouchet*. 547, L93 (2001)
- Gravitational Microlensing of Gamma-Ray Burst Afterglows by Single and Binary Stars. *Shude Mao & Abraham Loeb*. 547, L97 (2001)
- A Model of Void Formation. *Yasmin Friedmann & Tsvi Piran*. 548, 1 (2001)
- Weak Gravitational Lensing Bispectrum. *Asantha Cooray & Wayne Hu*. 548, 7 (2001)
- On the Initial Mass Function of Population III Stars. *Fumitaka Nakamura & Masayuki Umemura*. 548, 19 (2001)
- Hierarchical Galaxy Formation and Substructure in the Galaxy's Stellar Halo. *James S. Bullock, Andrey V. Kravtsov, & David H. Weinberg*. 548, 33 (2001)
- Simulations of Pregalactic Structure Formation with Radiative Feedback. *Marie E. Machacek, Greg L. Bryan, & Tom Abel*. 548, 509 (2001)
- On the Association of Gamma-Ray Bursts with Massive Stars: Implications for Number Counts and Lensing Statistics. *Cristiano Porciani & Piero Madau*. 548, 522 (2001)

Effects of Luminosity Functions Induced by Relativistic Beaming on the Statistics of Cosmological Gamma-Ray Bursts. *Chunglee Kim, Heon-Young Chang, & Insu Yi*. 548, 532 (2001)

The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch*. 548, 550 (2001)

Fast Cosmic Microwave Background Analyses via Correlation Functions. *István Szapudi, Simon Prunet, Dmitry Pogosyan, Alexander S. Szalay, & J. Richard Bond*. 548, L115 (2001)

## DENSE MATTER

*r*-Modes of Neutron Stars with a Solid Crust. *Shijun Yoshida & Umin Lee*. 546, 1121 (2001)

Cold Ideal Equation of State for Strongly Magnetized Neutron-Star Matter: Effects on Muon Production and Pion Condensation. *In-Saeng Suh & G. J. Mathews*. 546, 1126 (2001)

Millimetric Ground-based Observation of CMBR Anisotropy at  $\delta = +28^\circ$ . *G. Romeo, S. Ali, B. Femenia, M. Limon, L. Piccirillo, & R. Rebolo*. 548, L1 (2001)

The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models. *M. H. Montgomery, T. S. Metcalfe, & D. E. Winget*. 548, L53 (2001)

Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti*. 548, L175 (2001)

Neutron Stars with a Stable, Light Supersymmetric Baryon. *Shmuel Balberg, Glennys R. Farrar, & Tsvi Piran*. 548, L179 (2001)

## DIFFUSION

On the Use of Correlations to Determine the Motions and Properties of Mesoscale Magnetic Features in the Solar Photosphere. *Herschel B. Snodgrass & Adam A. Smith*. 546, 528 (2001)

The Origin of Mn II Emission in the Spectra of Chemically Peculiar Stars. *T. A. A. Sigt*. 546, L115 (2001)

The Modified Weighted Slab Technique: Models and Results. *Frank C. Jones, Andrew Lukasiak, Vladimir Ptuskin, & William Webber*. 547, 264 (2001)

On the Timescale for the Formation of Protostellar Cores in Magnetic Interstellar Clouds. *Glenn E. Ciolek & Shantanu Basu*. 547, 272 (2001)

Magnetic Field-Line Wandering and Shock Front Acceleration: Application to the Radio Emission of SN 1987A. *B. R. Ragot*. 547, 1010 (2001)

## EDITORIALS, NOTICES

Editorial: New Subjects for a New Millennium. *Robert C. Kennicutt, Jr.* 546, 1 (2001)

*Astrophysical Journal* Subject Headings. *Robert C. Kennicutt, Jr.* 546, 605 (2001)

## ELEMENTARY PARTICLES

A Radio Telescope Search for Axions. *B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu*. 546, 825 (2001)

Relativistic Effects on Neutrino Pair Annihilation above a Kerr Black Hole with the Accretion Disk. *Katsuaki Asano & Takeshi Fukuyama*. 546, 1019 (2001)

Neutrino Astronomy with the MACRO Detector. *M. Ambrosio, R. Antolini, G. Auriemma, D. Bakari, A. Baldini, G. C. Barbarino, B. C. Barish, G. Battistoni, R. Bellotti, C. Bemporad, P. Bernardini, H. Bilokon, V. Bisi, C. Bloise, C. Bower, M. Brigida, S. Bussino, F. Cafagna, M. Calicchio, D. Campana, M. Carboni, S. Cecchini, F. Cei, V. Chiarella, B. C. Choudhary, S. Couto, G. De Cataldo, H. Dekhissi, C. De Marzo, I. De Mitri, J. Derkaoui, M. De Vincenzi, A. di Credico, O. Erriquez, C. Favuzzi, C. Forti, P. Fusco, G. Giacomelli, G. Giannini, N. Giglietto, M. Giorgini, M. Grassi, L. Gray, A. Grillo, F. Guarino, C. Gustavino, A. Habig, K. Hanson, R. Heinz, E. Iarocci, E. Katsavounidis, I. Katsavounidis, E. Kearns, H. Kim, S. Kyriazopoulou, E. Lamanna, C. Lane, S. L. Levin, P. Lipari, N. P. Longley, M. J. Longo, F. Loparco, F. Maaroufi, G. Mancarella, G. Mandrioli, S. Manzoor, A. Margiotta, A. Marini, D. Martello, A. Marzari-Chiesa, M. N. Mazzotta, D. G. Michael, S. Mikheyev, L. Miller, P. Monacelli, T. Montaruli, M. Monteno, S. Mufson, J. Musser, D. Nicolò, R. Nolty, C. Okada, C. Orth, G. Osteria, M. Ouchrif, O. Palamara, V. Patera, L. Patrizi, R. Pazzi, C. W. Peck, L. Perrone, S. Petreria, P. Pistilli, V. Popa, A. Rainò, J. Reynoldson, F. Ronga, C. Satriano, L. Satta, E. Scapparone, K. Scholberg, A. Sciubba, P. Serra, M. Sioli, M. Sitta, P. Spinelli, M. Spinetti, M. Spurio, R. Steinberg, J. L. Stone, L. R. Sulak, A. Surdo, G. Tarlé, V. Togo, M. Vakili, E. Vilela, C. W. Walter, & R. Webb*. 546, 1038 (2001)

Neutron Stars with a Stable, Light Supersymmetric Baryon. *Shmuel Balberg, Glennys R. Farrar, & Tsvi Piran*. 548, L179 (2001)

## EQUATION OF STATE

Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. *Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb*. 546, 1098 (2001)

MHD Equation of State with Relativistic Electrons. *Zhigang Gong, Werner Däppen, & Ladislav Zejda*. 546, 1178 (2001)

Implications for Quintessence Models from MAXIMA-1 and BOOMERANG-98. *A. Balbi, C. Baccigalupi, S. Matarrese, F. Perrotta, & N. Vittorio*. 547, L89 (2001)

Neutron Stars with a Stable, Light Supersymmetric Baryon. *Shmuel Balberg, Glennys R. Farrar, & Tsvi Piran*. 548, L179 (2001)

## ERRATA, ADDENDA

A Rich Cluster of Galaxies near the Quasar B2 1335+28 at  $z = 1.1$ : Color Distribution and Star Formation Properties: Erratum. *Ichir Tanaka, Toru Yamada, Alfonso Aragón-Salamanca, Tadayuki Kodama, Takamitsu Miyaji, Kouji Ohta, & Nobuo Arimoto*. 546, 604 (2001) (Orig. paper in 528, 123 (2000))

## EXTRATERRESTRIAL INTELLIGENCE

A VLA Search for the Ohio State "Wow." *Robert H. Gray & Kevin B. Marvel*. 546, 1171 (2001)

## GALAXIES: ABUNDANCES

$\text{H}_2$ , C I, Metallicity, and Dust Depletion in the  $z = 2.34$  Damped Ly $\alpha$  Absorption System toward QSO 1232+0815. *Jian Ge, Jill Bechtold, & Varsha P. Kulkarni*. 547, L1 (2001)

First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy. *K. A. Venn, D. J. Lennon, A. Kaufer, J. K. McCarthy, N. Przybilla, R. P. Kudritzki, M. Lemke, E. D. Skillman, & S. J. Smartt*. 547, 765 (2001)

Chandra Observation of M84, a Radio Lobe Elliptical Galaxy in the Virgo Cluster. *A. Finoguenov & C. Jones*. 547, L107 (2001)

Central Elemental Abundance Ratios in the Perseus Cluster: Resonant Scattering or SN Ia Enrichment? *Renato A. Dupke & Keith A. Arnaud*. 548, 141 (2001)

Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw*. 548, L33 (2001)

Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent*. 548, 592 (2001)

The Metallicity of  $0.5 < z < 1$  Field Galaxies. *C. Marcella Carollo & Simon J. Lilly*. 548, L153 (2001)

## GALAXIES: ACTIVE

The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. *Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent*. 546, 205 (2001)

Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. *S. J. Tingay & D. W. Murphy*. 546, 210 (2001)

X-Ray Imaging of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L9 (2001)

High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver*. 546, L13 (2001)

Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky*. 546, 759 (2001)

NICMOS Observations of Low-Redshift Quasar Host Galaxies. *K. K. McLeod & B. A. McLeod*. 546, 782 (2001)

Heavy X-Ray Absorption in Soft X-Ray-Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverly J. Wills, & N. Iyomoto*. 546, 795 (2001)

The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst-Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer*. 546, 845 (2001)

Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cherie L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth*. 546, 866 (2001)

- Four Years of Extreme Ultraviolet Observations of Markarian 421. I. Spectral Analysis. *I. Cagnoni & A. Fruscione*. 546, 877 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. *I. Cagnoni, I. E. Papadakis, & A. Fruscione*. 546, 886 (2001)
- NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen*. 546, 952 (2001)
- Broadband Spectral Energy Distributions of Active Galactic Nuclei from an Accretion Disk with Advective Coronal Flow. *Toshihiro Kawaguchi, Toshiya Shimura, & Shin Mineshige*. 546, 966 (2001)
- Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey*. 546, L91 (2001)
- Near-Infrared Imaging of the Host Galaxies of Three Radio-loud Quasars at  $z \sim 1.5$ . *Renato Falomo, Jari Kotilainen, & Aldo Treves*. 547, 124 (2001)
- Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the Chandra High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe*. 547, L25 (2001)
- Radio Variability of Sagittarius A\*—A 106 Day Cycle. *Jun-Hui Zhao, G. C. Bower, & W. M. Goss*. 547, L29 (2001)
- Estimation of Relativistic Accretion Disk Parameters from Iron Line Emission. *V. I. Pariev, B. C. Bromley, & W. A. Miller*. 547, 649 (2001)
- Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad*. 547, 667 (2001)
- An RXTE Survey of Long-Term X-Ray Variability in Seyfert 1 Galaxies. *A. Markowitz & R. Edelson*. 547, 684 (2001)
- Chandra X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell*. 547, 740 (2001)
- Search for Short Variability Timescale of the GeV Gamma-Ray-loud Blazars. *G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing*. 548, 200 (2001)
- New Evidence for the Unified Scheme of BL Lacertae Objects and FR I Radio Galaxies. *J. M. Bai & Myung Gyoan Kim*. 548, 244 (2001)
- Chandra Grating Spectroscopy of the Seyfert Galaxy Ton S180. *T. J. Turner, I. M. George, T. Yaqoob, G. Kriss, D. M. Crenshaw, S. Kraemer, W. Zheng, J. Wang, & K. Nandra*. 548, L13 (2001)
- Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters. *M. Cappi, P. Mazzotta, M. Elvis, D. J. Burke, A. Comastri, F. Fiore, W. Forman, A. Fruscione, P. Green, D. Harris, E. J. Hooper, C. Jones, J. S. Kaastra, E. Kellogg, S. Murray, B. McNamara, F. Nicastro, T. J. Ponman, E. M. Schlegel, A. Siemiginowska, H. Tananbaum, A. Vikhlinin, S. Virani, & B. Wilkes*. 548, 624 (2001)
- Evidence for Rapid Iron K $\alpha$  Line Flux Variability in MGC -6-30-15. *Simon Vaughan & Rick Edelson*. 548, 694 (2001)
- Simulations of Accretion Flows Crossing the Last Stable Orbit. *Philip J. Armitage, Christopher S. Reynolds, & James Chiang*. 548, 868 (2001)
- Evidence for a Source Size of Less Than 2000 AU in Quasar 2237+0305. *Atsunori Yonehara*. 548, L127 (2001)
- GALAXIES: BL LACERTAE OBJECTS: GENERAL**
- New Evidence for the Unified Scheme of BL Lacertae Objects and FR I Radio Galaxies. *J. M. Bai & Myung Gyoan Kim*. 548, 244 (2001)
- GALAXIES: BL LACERTAE OBJECTS: INDIVIDUAL**
- Name: Markarian 421**
- Four Years of Extreme Ultraviolet Observations of Markarian 421. I. Spectral Analysis. *I. Cagnoni & A. Fruscione*. 546, 877 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. *I. Cagnoni, I. E. Papadakis, & A. Fruscione*. 546, 886 (2001)
- Name: Markarian 501**
- The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999. *F. Aharonian, A. Akhperjanian, J. Barrio, K. Bernalöh, H. Börs, H. Bojahr, O. Bolz, J. Contreras, J. Cortina, S. Denninghoff, V. Fonseca, J. Gonzalez, N. Götz, G. Heinzelmann, G. Hermann, A. Heusler, W. Hofmann, D. Horns, C. Iserlohe, A. Ibarra, I. Jung, R. Kankanyan, M. Kestel, J. Kettler, A. Kohnle, A. Konopelko, H. Kornmeyer, D. Kranich, H. Krawczynski, H. Lampeit, E. Lorenz, F. Lascarelli, N. Magnussen, O. Mang, H. Meyer, R. Mirzoyan, A. Moralejo, L. Padilla, M. Panter, R. Plaga, A. Plyasheshnikov, J. Prahl, G. Pühlhofer, A. Röhling, W. Rhode, G. P. Rowell, V. Sahakian, M. Samorski, M. Schilling, F. Schröder, M. Siems, W. Stamm, M. Tluczykont, H. Völk, C. Wiedner, & W. Witte*. 546, 898 (2001)
- GALAXIES: CLUSTERS: GENERAL**
- How Many Galaxies Fit in a Halo? Constraints on Galaxy Formation Efficiency from Spatial Clustering. *Román Scoccimarro, Ravi K. Sheth, Lam Hui, & Bhuvnesh Jain*. 546, 20 (2001)
- Gravitational Lensing by Galaxy Groups in the Hubble Deep Field. *David C. Fox & Ue-Li Pen*. 546, 35 (2001)
- Double Lenses. *Giuseppe Bertin & Marco Lombardi*. 546, 47 (2001)
- The Evolution of X-Ray Clusters and the Entropy of the Intracluster Medium. *Paolo Tozzi & Colin Norman*. 546, 63 (2001)
- Four Measures of the Intracluster Medium Temperature and Their Relation to a Cluster's Dynamical State. *B. F. Mathiesen & A. E. Evrard*. 546, 100 (2001)
- Iron Abundance Profiles of 12 Clusters of Galaxies Observed with BeppoSAX. *Jimmy A. Irwin & Joel N. Bregman*. 546, 150 (2001)
- Do Clusters Contain a Large Population of Dwarf Galaxies? *Carlos A. Valotto, Ben Moore, & Diego G. Lambas*. 546, 157 (2001)
- The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 546, 805 (2001)
- The Orbital Structure of Dark Matter Halos with Gas. *Andisheh Mahdavi*. 546, 812 (2001)
- Radial Density and Temperature Profiles of the Intracluster Gas Constructed Jointly from the X-Ray Surface Brightness Measurement and the Universal Density Profile. *Xiang-Ping Wu & Tzihong Chiueh*. 547, 82 (2001)
- Morphology-Density Relation for Simulated Clusters of Galaxies in Cold Dark Matter-dominated Universes. *Takashi Okamoto & Masahiro Nagashima*. 547, 109 (2001)
- Formation and Evolution of E+A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch*. 547, L17 (2001)
- Superclustering of Faint Galaxies in the Field of a QSO Concentration at  $z \sim 1.1$ . *Ichi Tanaka, Toru Yamada, Edwin L. Turner, & Yasushi Suto*. 547, 521 (2001)
- Scaling Properties of the Redshift Power Spectrum: Theoretical Models. *Y. P. Jing & G. Börner*. 547, 545 (2001)
- The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake*. 547, 555 (2001)
- The Effect of the Cosmic Web on Cluster Weak Lensing Mass Estimates. *Christopher A. Metzler, Martin White, & Chris Loken*. 547, 560 (2001)
- A Serendipitous Galaxy Cluster Survey with XMM: Expected Catalog Properties and Scientific Applications. *A. Kathy Romer, Pedro T. P. Viana, Andrew R. Liddle, & Robert G. Mann*. 547, 594 (2001)
- The Evolution of Population Gradients in Galaxy Clusters: The Butcher-Oemler Effect and Cluster Infall. *E. Ellingson, H. Lin, H. K. C. Yee, & R. G. Carlberg*. 547, 609 (2001)
- Deep Near-Infrared Luminosity Function of a Cluster of Galaxies at  $z = 0.3$ . *S. Andreon*. 547, 623 (2001)
- Stellar Variability in the Metal-rich, Obscured Globular Cluster Terzan 5. *Peter D. Edmonds, Jonathan E. Grindlay, Haldan Cohn, & Phyllis Lugger*. 547, 829 (2001)
- A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields. *T. E. Clarke, P. P. Kronberg, & Hans Bohringer*. 547, L111 (2001)
- The Contribution of Extreme Ultraviolet from Clusters of Galaxies to the Cosmic Ionizing Background. *Scott W. Randall & Craig L. Sarazin*. 548, 60 (2001)
- Evolution of the Internal Dynamics of Galaxy Clusters. *Marisa Girardi & Marino Mezzetti*. 548, 79 (2001)
- The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes*. 548, 97 (2001)
- Observational Constraints on Higher Order Clustering up to  $z \approx 1$ . *István Szapudi, Marc Postman, Tod R. Lauer, & William Oegerle*. 548, 114 (2001)
- Wide-Field Imaging of the Hubble Deep Field-South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate*. 548, 127 (2001)



- Submillimeter Imaging of a Protocluster Region at  $z = 3.09$ . *Scott C. Chapman*. 548, L17 (2001)
- Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch*. 548, 550 (2001)
- The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ . *C. N. Sabbey, A. Oemler, P. Coppi, C. Baltay, A. Bongiovanni, G. Bruzual, C. E. Garcia, J. Musser, A. W. Rengstorff, & J. A. Snyder*. 548, 585 (2001)
- Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters. *M. Cappi, P. Mazzotta, M. Elvis, D. J. Burke, A. Comastri, F. Fiore, W. Forman, A. Fruscione, P. Green, D. Harris, E. J. Hooper, C. Jones, J. S. Kaastra, E. Kellogg, S. Murray, B. McNamara, F. Nicastro, T. J. Ponman, E. M. Schlegel, A. Siemiginowska, H. Tananbaum, A. Vikhlinin, S. Virani, & B. Wilkes*. 548, 624 (2001)
- Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey. *Joshua C. Kempner & Craig L. Sarazin*. 548, 639 (2001)
- Extreme-Ultraviolet Emission in the Fornax Cluster of Galaxies. *Stuart Bowyer, Eric Korpela, & Thomas Berghöfer*. 548, L135 (2001)
- Substructure and Dynamics of the Fornax Cluster. *Michael J. Drinkwater, Michael D. Gregg, & Matthew Colless*. 548, L139 (2001)
- The Butcher-Oemler Effect in 295 Clusters: Strong Redshift Evolution and Cluster Richness Dependence. *V. E. Margoniner, R. R. de Carvalho, R. R. Gal, & S. G. Djorgovski*. 548, L143 (2001)
- The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger*. 548, L147 (2001)
- GALAXIES: CLUSTERS: INDIVIDUAL**
- Name: Abell 262**
- The Beta Problem: A Study of Abell 262. *James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch*. 548, 550 (2001)
- Name: Abell 426**
- Velocity Gradients in the Intracluster Gas of the Perseus Cluster. *Renato A. Dupke & Joel N. Bregman*. 547, 705 (2001)
- Name: Abell 2199**
- The Orbital Structure of Dark Matter Halos with Gas. *Andisheh Mahdavi*. 546, 812 (2001)
- Name: Centaurus**
- The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- Name: Coma**
- The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 546, 805 (2001)
- Name: Fornax**
- Substructure and Dynamics of the Fornax Cluster. *Michael J. Drinkwater, Michael D. Gregg, & Matthew Colless*. 548, L139 (2001)
- Name: Perseus**
- Central Elemental Abundance Ratios in the Perseus Cluster: Resonant Scattering or SN Ia Enrichment? *Renato A. Dupke & Keith A. Arnaud*. 548, 141 (2001)
- Name: Virgo**
- The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 546, 805 (2001)
- The Extreme-Ultraviolet Excess Emission of the Virgo and A1795 Clusters: Reobservation with In Situ Background Measurements. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz*. 547, L7 (2001)
- RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky*. 547, 722 (2001)
- Alphanumeric: Cl 0024+16**
- The Orbital Structure of Dark Matter Halos with Gas. *Andisheh Mahdavi*. 546, 812 (2001)
- Alphanumeric: Cl J1226.9+3332**
- Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- Alphanumeric: Cl J0152.7-1357**
- Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. *Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner*. 548, L23 (2001)
- Alphanumeric: HCG 62**
- Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae*. 546, L87 (2001)
- GALAXIES: COOLING FLOWS**
- Iron Abundance Profiles of 12 Clusters of Galaxies Observed with BeppoSAX. *Jimmy A. Irwin & Joel N. Bregman*. 546, 150 (2001)
- The Orbital Structure of Dark Matter Halos with Gas. *Andisheh Mahdavi*. 546, 812 (2001)
- Velocity Gradients in the Intracluster Gas of the Perseus Cluster. *Renato A. Dupke & Joel N. Bregman*. 547, 705 (2001)
- Oxygen Absorption in M87: Evidence for a Warm+Hot Interstellar Medium. *David A. Buote*. 548, 652 (2001)
- GALAXIES: DISTANCES AND REDSHIFTS**
- Breaking the Degeneracy of Cosmological Parameters in Galaxy Redshift Surveys. *Mikel Susperregi*. 546, 85 (2001)
- The Size and Shape of Voids in Three-dimensional Galaxy Surveys. *Jason D. Schmidt, Barbara S. Ryden, & Adrian L. Melott*. 546, 609 (2001)
- Lyman-Continuum Emission from Galaxies at  $z \approx 3.4$ . *Charles C. Steidel, Max Pettini, & Kurt L. Adelberger*. 546, 665 (2001)
- VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population. *P. M. Vreeswijk, A. Fruchter, L. Kaper, E. Rol, T. J. Galama, J. van Paradijs, C. Kouveliotou, R. A. M. J. Wijers, E. Pian, E. Palazzi, N. Masetti, F. Frontera, S. Savaglio, K. Reinsch, F. V. Hessman, K. Beuermann, H. Nicklas, & E. P. J. van den Heuvel*. 546, 672 (2001)
- The SBF Survey of Galaxy Distances. IV. SBF Magnitudes, Colors, and Distances. *John L. Tonry, Alan Dressler, John P. Blakeslee, Edward A. Ajhar, André B. Fletcher, Gerard A. Luppino, Mark R. Metzger, & Christopher B. Moore*. 546, 681 (2001)
- Scaling Properties of the Redshift Power Spectrum: Theoretical Models. *Y. P. Jing & G. Börner*. 547, 545 (2001)
- Supernova 1991T and the Value of the Hubble Constant. *Brad K. Gibson & Peter B. Stetson*. 547, L103 (2001)
- Evolution of the Internal Dynamics of Galaxy Clusters. *Marisa Girardi & Marino Mezzetti*. 548, 79 (2001)
- A Determination of the Hubble Constant from Cepheid Distances and a Model of the Local Peculiar Velocity Field. *Jeffrey A. Willick & Puneet Batra*. 548, 564 (2001)
- GALAXIES: DWARF**
- A Radio Telescope Search for Axions. *B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu*. 546, 825 (2001)
- Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake*. 547, L123 (2001)
- Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent*. 548, 592 (2001)
- GALAXIES: ELLIPTICAL AND LENTICULAR, CD**
- Starbursts in Multiple Galaxy Mergers. *Kenji Bekki*. 546, 189 (2001)
- Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernarri, & W. W. Zeilinger*. 546, 903 (2001)
- Emission Mechanisms in X-Ray-faint Galaxies. *Beth A. Brown & Joel N. Bregman*. 547, 154 (2001)
- Formation and Evolution of E+A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch*. 547, L17 (2001)
- Origin of the Scatter in the X-Ray Luminosity of Early-Type Galaxies Observed with ROSAT. *Kyoko Matsushita*. 547, 693 (2001)

Chandra Observation of M84, a Radio Lobe Elliptical Galaxy in the Virgo Cluster. *A. Finoguenov & C. Jones.* 547, L107 (2001)

Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw.* 548, L33 (2001)

The Role of Clustering of Subclumps in Bright Elliptical Galaxy Formation from a Low-Spin Seed Galaxy. *Daisuke Kawata.* 548, 703 (2001)

Are There Advection-dominated Accretion Flows in Nearby Giant Elliptical Galaxies? *Martin E. Sulkanen & Joel N. Bregman.* 548, L131 (2001)

## GALAXIES: EVOLUTION

QSO 2359–1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack.* 546, 134 (2001)

Hubble Space Telescope Optical–Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe.* 546, 216 (2001)

Merging History as a Function of Halo Environment. *Stefan Gottlöber, Anatoly Klypin, & Andrey V. Kravtsov.* 546, 223 (2001)

Star Formation History in the NICMOS Northern Hubble Deep Field. *Rodger I. Thompson, Ray J. Weymann, & Lisa J. Storrie-Lombardi.* 546, 694 (2001)

Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae.* 546, L87 (2001)

A New Interpretation of Chain Galaxies at High Redshift. *Yoshiaki Taniguchi & Yasuhiro Shioya.* 547, 146 (2001)

LRG J0239–0134: A Ring Galaxy or a Pair of Superbubbles at  $z = 1$ ? *Yoshiaki Taniguchi & Takashi Murayama.* 547, L13 (2001)

The Evolution of Population Gradients in Galaxy Clusters: The Butcher-Oemler Effect and Cluster Infall. *E. Ellingson, H. Lin, H. K. C. Yee, & R. G. Carlberg.* 547, 609 (2001)

Deep Near-Infrared Luminosity Function of a Cluster of Galaxies at  $z = 0.3$ . *S. Andreon.* 547, 623 (2001)

Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)

The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes.* 548, 97 (2001)

Observational Constraints on Higher Order Clustering up to  $z \approx 1$ . *István Szapudi, Marc Postman, Tod R. Lauer, & William Oegerle.* 548, 114 (2001)

Wide-Field Imaging of the Hubble Deep Field–South Region. II. The Evolution of Galaxy Clustering at  $z < 1$ . *Harry I. Teplitz, Robert S. Hill, Eliot M. Malumuth, Nicholas R. Collins, Jonathan P. Gardner, Povilas Palunas, & Bruce E. Woodgate.* 548, 127 (2001)

Submillimeter Imaging of a Protocluster Region at  $z = 3.09$ . *Scott C. Chapman.* 548, L17 (2001)

Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw.* 548, L33 (2001)

A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and H $\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)

The Role of Clustering of Subclumps in Bright Elliptical Galaxy Formation from a Low-Spin Seed Galaxy. *Daisuke Kawata.* 548, 703 (2001)

The Butcher-Oemler Effect in 295 Clusters: Strong Redshift Evolution and Cluster Richness Dependence. *V. E. Margoniner, R. R. de Carvalho, R. R. Gal, & S. G. Djorgovski.* 548, L143 (2001)

The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger.* 548, L147 (2001)

The Metallicity of  $0.5 < z < 1$  Field Galaxies. *C. Marcella Carollo & Simon J. Lilly.* 548, L153 (2001)

## GALAXIES: FORMATION

The Stability of Disks in Cusped Potentials. *J. A. Sellwood & N. W. Evans.* 546, 176 (2001)

Starbursts in Multiple Galaxy Mergers. *Kenji Bekki.* 546, 189 (2001)

Hubble Space Telescope Optical–Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe.* 546, 216 (2001)

Merging History as a Function of Halo Environment. *Stefan Gottlöber, Anatoly Klypin, & Andrey V. Kravtsov.* 546, 223 (2001)

On the Origin of the Rotation Curves of Dark Matter–dominated Galaxies. *Ilhan T. Iliev & Paul R. Shapiro.* 546, L5 (2001)

Primordial Star Formation under Far-Ultraviolet Radiation. *Kazuyuki Omukai.* 546, 635 (2001)

Lyman-Continuum Emission from Galaxies at  $z \approx 3.4$ . *Charles C. Steidel, Max Pettini, & Kurt L. Adelberger.* 546, 665 (2001)

Decaying Cold Dark Matter Model and Small-Scale Power. *Renyue Cen.* 546, L77 (2001)

The Metal Enrichment and Temperature of the Intergalactic Medium. *Renyue Cen & Greg L. Bryan.* 546, L81 (2001)

Dynamical Effects of Global Thermal Instability in Shock-compressed Gas Slabs. *M. Yamada & R. Nishi.* 547, 99 (2001)

A New Interpretation of Chain Galaxies at High Redshift. *Yoshiaki Taniguchi & Yasuhiro Shioya.* 547, 146 (2001)

LRG J0239–0134: A Ring Galaxy or a Pair of Superbubbles at  $z = 1$ ? *Yoshiaki Taniguchi & Takashi Murayama.* 547, L13 (2001)

Formation and Evolution of E+A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch.* 547, L17 (2001)

The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. *F. Governato, S. Ghigna, B. Moore, T. Quinn, J. Stadel, & G. Lake.* 547, 555 (2001)

Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt.* 547, 574 (2001)

On the Initial Mass Function of Population III Stars. *Fumitaka Nakamura & Masayuki Umemura.* 548, 19 (2001)

Hierarchical Galaxy Formation and Substructure in the Galaxy’s Stellar Halo. *James S. Bullock, Andrey V. Kravtsov, & David H. Weinberg.* 548, 33 (2001)

Nonlinear Gravitational Growth of Large-Scale Structures inside and outside Standard Cosmology. *E. Gaztañaga & J. A. Lobo.* 548, 47 (2001)

Submillimeter Imaging of a Protocluster Region at  $z = 3.09$ . *Scott C. Chapman.* 548, L17 (2001)

Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw.* 548, L33 (2001)

Simulations of Pregalactic Structure Formation with Radiative Feedback. *Marie E. Machacek, Greg L. Bryan, & Tom Abel.* 548, 509 (2001)

The Role of Clustering of Subclumps in Bright Elliptical Galaxy Formation from a Low-Spin Seed Galaxy. *Daisuke Kawata.* 548, 703 (2001)

The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger.* 548, L147 (2001)

The Metallicity of  $0.5 < z < 1$  Field Galaxies. *C. Marcella Carollo & Simon J. Lilly.* 548, L153 (2001)

## GALAXIES: FUNDAMENTAL PARAMETERS

Star Formation History in the NICMOS Northern Hubble Deep Field. *Rodger I. Thompson, Ray J. Weymann, & Lisa J. Storrie-Lombardi.* 546, 694 (2001)

Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger.* 546, 903 (2001)

Ensembles of Classifiers for Morphological Galaxy Classification. *D. Bazell & David W. Aha.* 548, 219 (2001)

## GALAXIES: GENERAL

On the Origin of the Rotation Curves of Dark Matter–dominated Galaxies. *Ilhan T. Iliev & Paul R. Shapiro.* 546, L5 (2001)

A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and H $\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)

**GALAXIES: HALOS**

The Stability of Disks in Cusped Potentials. *J. A. Sellwood & N. W. Evans.* 546, 176 (2001)

On the Origin of the Rotation Curves of Dark Matter-dominated Galaxies. *Ilian T. Iliev & Paul R. Shapiro.* 546, L5 (2001)

The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood.* 546, 916 (2001)

The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid-Dynamical Models. *Benjamin J. Weiner, J. A. Sellwood, & T. B. Williams.* 546, 931 (2001)

Morphology-Density Relation for Simulated Clusters of Galaxies in Cold Dark Matter-dominated Universes. *Takashi Okamoto & Masahiro Nagashima.* 547, 109 (2001)

Constraints on Cold H<sub>2</sub> Clouds from Gravitational Microlensing Searches. *R. R. Rafikov & B. T. Draine.* 547, 207 (2001)

Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt.* 547, 574 (2001)

RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky.* 547, 722 (2001)

Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte.* 547, L133 (2001)

First Structure Formation: A Simulation of Small-Scale Structure at High Redshift. *Hannah Jang-Condell & Lars Hernquist.* 548, 68 (2001)

**GALAXIES: INDIVIDUAL****Messier Number: M31**

WFPC2 Observations of Massive and Compact Young Star Clusters in M31. *Benjamin F. Williams & Paul W. Hodge.* 548, 190 (2001)

**Messier Number: M82**

Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the Chandra High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe.* 547, L25 (2001)

**Messier Number: M87**

Oxygen Absorption in M87: Evidence for a Warm+Hot Interstellar Medium. *David A. Buote.* 548, 652 (2001)

**Messier Number: M101**

A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel.* 547, 754 (2001)

**NGC Number: NGC 1068**

Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cher-e L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth.* 546, 866 (2001)

**NGC Number: NGC 1316**

X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). *M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda.* 546, L19 (2001)

**NGC Number: NGC 1365**

Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)

**NGC Number: NGC 1399**

Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian.* 547, 731 (2001)

**NGC Number: NGC 1566**

Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)

**NGC Number: NGC 1614**

NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen.* 546, 952 (2001)

**NGC Number: NGC 2300**

Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian.* 547, 731 (2001)

**NGC Number: NGC 2997**

Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)

**NGC Number: NGC 3079**

Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin.* 547, L115 (2001)

**NGC Number: NGC 3621**

Stellar Spectroscopy Far beyond the Local Group. *Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla.* 548, L159 (2001)

**NGC Number: NGC 4038/9**

Molecular Gas and the Modest Star Formation Efficiency in the "Antennae" Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee.* 548, 172 (2001)

**NGC Number: NGC 4123**

The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood.* 546, 916 (2001)

**NGC Number: NGC 4278**

Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian.* 547, 731 (2001)

**NGC Number: NGC 4365**

Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw.* 548, L33 (2001)

**NGC Number: NGC 4374**

Chandra Observation of M84, a Radio Lobe Elliptical Galaxy in the Virgo Cluster. *A. Finoguenov & C. Jones.* 547, L107 (2001)

**NGC Number: NGC 4472**

RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky.* 547, 722 (2001)

**NGC Number: NGC 4579**

The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. *Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent.* 546, 205 (2001)

**NGC Number: NGC 4594**

Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian.* 547, 731 (2001)

**NGC Number: NGC 4631**

Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631. *Andrew M. Smith, Nicholas R. Collins, William H. Waller, Morton S. Roberts, Denise A. Smith, Ralph C. Bohlin, K.-P. Cheng, Michael N. Fanelli, Susan G. Neff, Robert W. O'Connell, Ronald A. Parise, Eric P. Smith, & Theodore P. Stecher.* 546, 829 (2001)

**NGC Number: NGC 4649**

Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger.* 546, 903 (2001)

RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky.* 547, 722 (2001)

**NGC Number: NGC 5548**

Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky.* 546, 759 (2001)

**NGC Number: NGC 6822**

First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy. *K. A. Venn, D. J. Lennon, A. Kaufer, J. K. McCarthy, N. Przybilla, R. P. Kudritzki, M. Lemke, E. D. Skillman, & S. J. Smartt.* 547, 765 (2001)



# I Galaxies: Individual—Galaxies: Intergalactic Medium

## NGC Number: NGC 7097

Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger.* 546, 903 (2001)

## NGC Number: NGC 7213

The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux.* 546, L97 (2001)

## Name: Arp 220

On the Hidden Nuclear Starburst in Arp 220. *Yasuhiro Shioya, Neil Trentham, & Yoshiaki Taniguchi.* 548, L29 (2001)

## Name: Arp 244

Molecular Gas and the Modest Star Formation Efficiency in the "Antennae" Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee.* 548, 172 (2001)

## Name: Centaurus A

Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. *S. J. Tingay & D. W. Murphy.* 546, 210 (2001)

## Name: Circinus

X-Ray Imaging of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L9 (2001)

High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with *Chandra*. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L13 (2001)

## Name: Draco

Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent.* 548, 592 (2001)

## Name: Markarian 421

Four Years of Extreme Ultraviolet Observations of Markarian 421. I. Spectral Analysis. *I. Cagnoni & A. Fruscione.* 546, 877 (2001)

Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. *I. Cagnoni, I. E. Papadakis, & A. Fruscione.* 546, 886 (2001)

## Name: Markarian 486

Heavy X-Ray Absorption in Soft X-Ray–Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyamoto.* 546, 795 (2001)

## Name: Pictor A

*Chandra* X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell.* 547, 740 (2001)

## Name: Sagittarius

Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Steam from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte.* 547, L133 (2001)

## Name: Sextans

Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent.* 548, 592 (2001)

## Name: Ton S180

*Chandra* Grating Spectroscopy of the Seyfert Galaxy Ton S180. *T. J. Turner, I. M. George, T. Yaqoob, G. Kriss, D. M. Crenshaw, S. Kraemer, W. Zheng, J. Wang, & K. Nandra.* 548, L13 (2001)

## Name: Ursa Minor

Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent.* 548, 592 (2001)

## Alphanumeric: MCG –6-30-15

Evidence for Rapid Iron K $\alpha$  Line Flux Variability in MCG –6-30-15. *Simon Vaughan & Rick Edelson.* 548, 694 (2001)

## Alphanumeric: PG 1011–040

Heavy X-Ray Absorption in Soft X-Ray–Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyamoto.* 546, 795 (2001)

## Alphanumeric: PG 1535+547

Heavy X-Ray Absorption in Soft X-Ray–Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyamoto.* 546, 795 (2001)

## Alphanumeric: PG 2112+059

Heavy X-Ray Absorption in Soft X-Ray–Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyamoto.* 546, 795 (2001)

## Alphanumeric: UGC 7321

Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. *L. D. Matthews & Kenneth Wood.* 548, 150 (2001)

## GALAXIES: INTERACTIONS

QSO 2359–1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack.* 546, 134 (2001)

On the Effect of Chaotic Orbits on Dynamical Friction. *Sofia A. Cora, M. Marcela Vergne, & Juan C. Muzzio.* 546, 165 (2001)

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Morphology-Density Relation for Simulated Clusters of Galaxies in Cold Dark Matter-dominated Universes. *Takashi Okamoto & Masahiro Nagashima.* 547, 109 (2001)

Formation and Evolution of E+A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch.* 547, L17 (2001)

Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)

Molecular Gas and the Modest Star Formation Efficiency in the "Antennae" Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee.* 548, 172 (2001)

The Critical Velocity Effect as a Cause for the H $\alpha$  Emission from the Magellanic Stream. *C. Konz, H. Lesch, G. T. Birk, & H. Wiechen.* 548, 249 (2001)

## GALAXIES: INTERGALACTIC MEDIUM

Four Measures of the Intracluster Medium Temperature and Their Relation to a Cluster's Dynamical State. *B. F. Mathiesen & A. E. Evrard.* 546, 100 (2001)

Iron Abundance Profiles of 12 Clusters of Galaxies Observed with *BeppoSAX*. *Jimmy A. Irwin & Joel N. Bregman.* 546, 150 (2001)

Lyman-Continuum Emission from Galaxies at  $z \approx 3.4$ . *Charles C. Steidel, Max Pettini, & Kurt L. Adelberger.* 546, 665 (2001)

The Metal Enrichment and Temperature of the Intergalactic Medium. *Renyue Cen & Greg L. Bryan.* 546, L81 (2001)

Radial Density and Temperature Profiles of the Intracluster Gas Constructed Jointly from the X-Ray Surface Brightness Measurement and the Universal Density Profile. *Xiang-Ping Wu & Tzihong Chiueh.* 547, 82 (2001)

A New Interpretation of Chain Galaxies at High Redshift. *Yoshiaki Taniguchi & Yasuhiro Shioya.* 547, 146 (2001)

The Extreme-Ultraviolet Excess Emission of the Virgo and A1795 Clusters: Reobservation with In Situ Background Measurements. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz.* 547, L7 (2001)

Quasar Absorption Lines as a Function of Quasar Orientation Measures. *Gordon T. Richards, S. A. Laurent-Muehleisen, Robert H. Becker, & Donald G. York.* 547, 635 (2001)

Velocity Gradients in the Intracluster Gas of the Perseus Cluster. *Renato A. Dupke & Joel N. Bregman.* 547, 705 (2001)

RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. *Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky.* 547, 722 (2001)

*Chandra* Observation of M84, a Radio Lobe Elliptical Galaxy in the Virgo Cluster. *A. Finoguenov & C. Jones.* 547, L107 (2001)

The Contribution of Extreme Ultraviolet from Clusters of Galaxies to the Cosmic Ionizing Background. *Scott W. Randall & Craig L. Sarazin.* 548, 60 (2001)

Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey. *Joshua C. Kempner & Craig L. Sarazin.* 548, 639 (2001)

Oxygen Absorption in M87: Evidence for a Warm/Hot Interstellar Medium. *David A. Buote.* 548, 652 (2001)

Confusion of Diffuse Objects in the X-Ray Sky. *G. Mark Voit, August E. Evrard, & Greg L. Bryan.* 548, L123 (2001)

## GALAXIES: ISM

Starbursts in Multiple Galaxy Mergers. *Kenji Bekki.* 546, 189 (2001)

Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631. *Andrew M. Smith, Nicholas R. Collins, William H. Waller, Morton S. Roberts, Denise A. Smith, Ralph C. Bohlin, K.-P. Cheng, Michael N. Fanelli, Susan G. Neff, Robert W. O'Connell, Ronald A. Parise, Eric P. Smith, & Theodore P. Stecher.* 546, 829 (2001)

Emission Mechanisms in X-Ray-faint Galaxies. *Beth A. Brown & Joel N. Bregman.* 547, 154 (2001)

The Maximum Effect of Thermal Instability on Galactic Outflows. *Yutaka Fujita.* 547, 162 (2001)

Constraints on Cold H<sub>2</sub> Clouds from Gravitational Microlensing Searches. *R. R. Rafikov & B. T. Draine.* 547, 207 (2001)

Formation and Evolution of E-A Galaxies in Dusty Starburst Galaxies. *Kenji Bekki, Yasuhiro Shioya, & Warrick J. Couch.* 547, L17 (2001)

Origin of the Scatter in the X-Ray Luminosity of Early-Type Galaxies Observed with ROSAT. *Kyoko Matsushita.* 547, 693 (2001)

Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin.* 547, L115 (2001)

The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes.* 548, 97 (2001)

Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. *L. D. Matthews & Kenneth Wood.* 548, 150 (2001)

Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Helou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi.* 548, L73 (2001)

Oxygen Absorption in M87: Evidence for a Warm+Hot Interstellar Medium. *David A. Buote.* 548, 652 (2001)

High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle.* 548, 671 (2001)

A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungen Kim, & Lister Staveley-Smith.* 548, 749 (2001)

## GALAXIES: JETS

Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. *S. J. Tingay & D. W. Murphy.* 546, 210 (2001)

The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999. *F. Aharonian, A. Akhperjanian, J. Barrio, K. Bernlöhr, H. Börs, H. Bojahr, O. Bolz, J. Contreras, J. Cortina, S. Denninghoff, V. Fonseca, J. Gonzalez, N. Göting, G. Heinzelmann, G. Hermann, A. Heusler, W. Hofmann, D. Horns, C. Iserlohe, A. Ibarra, I. Jung, R. Kankanyan, M. Kestel, J. Kettler, A. Kohnle, A. Konopelko, H. Kormmeyer, D. Kranich, H. Krawczynski, H. Lampeitl, E. Lorenz, F. Lucarelli, N. Magnussen, O. Mang, H. Meyer, R. Mirzoyan, A. Moralejo, L. Padilla, M. Panter, R. Plaga, A. Plyasheshnikov, J. Prah, G. Pühlhofer, A. Röhring, W. Rhode, G. P. Rowell, V. Sahakian, M. Samorski, M. Schilling, F. Schröder, M. Siems, W. Stamm, M. Tluczykont, H. Völk, C. Wiedner, & W. Wittek.* 546, 898 (2001)

Production of <sup>2</sup>H, <sup>3</sup>He, and <sup>7</sup>Li from Interactions between Jets and Clouds. *M. Famiano, J. Vandeagriff, R. N. Boyd, T. Kajino, & P. Osmer.* 547, L21 (2001)

Chandra X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell.* 547, 740 (2001)

The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation. *D. L. Meier.* 548, L9 (2001)

## GALAXIES: KINEMATICS AND DYNAMICS

On the Effect of Chaotic Orbits on Dynamical Friction. *Sofia A. Cora, M. Marcela Vergne, & Juan C. Muzzio.* 546, 165 (2001)

The Stability of Disks in Cusped Potentials. *J. A. Sellwood & N. W. Evans.* 546, 176 (2001)

On the Origin of the Rotation Curves of Dark Matter-dominated Galaxies. *Ilian T. Iliev & Paul R. Shapiro.* 546, L5 (2001)

Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631. *Andrew M. Smith, Nicholas R. Collins, William H. Waller, Morton S. Roberts, Denise A. Smith, Ralph C. Bohlin, K.-P. Cheng, Michael N. Fanelli, Susan G. Neff, Robert W. O'Connell, Ronald A. Parise, Eric P. Smith, & Theodore P. Stecher.* 546, 829 (2001)

Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger.* 546, 903 (2001)

The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood.* 546, 916 (2001)

The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid-Dynamical Models. *Benjamin J. Weiner, J. A. Sellwood, & T. B. Williams.* 546, 931 (2001)

The  $M_{\bullet}$ - $\sigma$  Relation for Supermassive Black Holes. *David Merritt & Laura Ferrarese.* 547, 140 (2001)

Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)

Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin.* 547, L115 (2001)

Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)

Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte.* 547, L133 (2001)

Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. *L. D. Matthews & Kenneth Wood.* 548, 150 (2001)

Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw.* 548, L33 (2001)

High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle.* 548, 671 (2001)

## GALAXIES: LOCAL GROUP

Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)

Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte.* 547, L133 (2001)

## GALAXIES: LUMINOSITY FUNCTION, MASS FUNCTION

Do Clusters Contain a Large Population of Dwarf Galaxies? *Carlos A. Valotto, Ben Moore, & Diego G. Lambas.* 546, 157 (2001)

Deep Near-Infrared Luminosity Function of a Cluster of Galaxies at  $z = 0.3$ . *S. Andreon.* 547, 623 (2001)

Structure of the Large Magellanic Cloud from 2MASS. *Martin D. Weinberg & Sergei Nikolaev.* 548, 712 (2001)

## GALAXIES: MAGELLANIC CLOUDS

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A New (Old) Component of the Galaxy as the Origin of the Observed Large Magellanic Cloud Microlensing Events. *Evalyn I. Gates & Geza Gyuk.* 547, 786 (2001)

The Critical Velocity Effect as a Cause for the H $\alpha$  Emission from the Magellanic Stream. *C. Konz, H. Lesch, G. T. Birk, & H. Wiechen.* 548, 249 (2001)

Structure of the Large Magellanic Cloud from 2MASS. *Martin D. Weinberg & Sergei Nikolaev.* 548, 712 (2001)

Morphology and Evolution of the Large Magellanic Cloud Planetary Nebulae. *Richard A. Shaw, Letizia Stanghellini, Max Mutchler, Bruce Balick, & J. Chris Blades.* 548, 727 (2001)

- A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungeun Kim, & Lister Staveley-Smith.* 548, 749 (2001)
- GALAXIES: NUCLEI**
- The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. *Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent.* 546, 205 (2001)
- Hubble Space Telescope Optical-Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe.* 546, 216 (2001)
- X-Ray Imaging of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L13 (2001)
- The Galactic Center He I Stars: Remains of a Dissolved Young Cluster? *Orwin Gerhard.* 546, L39 (2001)
- The Narrow-Line Region of Seyfert Galaxies: Narrow-Line Seyfert 1 Galaxies versus Broad-Line Seyfert 1 Galaxies. *Tohru Nagao, Takashi Murayama, & Yoshiaki Taniguchi.* 546, 744 (2001)
- The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst-Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer.* 546, 845 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. I. Spectral Analysis. *I. Cagnoni & A. Fruscione.* 546, 877 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. *I. Cagnoni, I. E. Papadakis, & A. Fruscione.* 546, 886 (2001)
- NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen.* 546, 952 (2001)
- Broadband Spectral Energy Distributions of Active Galactic Nuclei from an Accretion Disk with Advective Coronal Flow. *Toshihiro Kawaguchi, Toshiya Shimura, & Shin Mineshige.* 546, 966 (2001)
- The Multitude of Unresolved Continuum Sources at 1.6 Microns in Hubble Space Telescope Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke.* 547, 129 (2001)
- Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. *T. Di Matteo, C. L. Carilli, & A. C. Fabian.* 547, 731 (2001)
- Chandra X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell.* 547, 740 (2001)
- Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin.* 547, L115 (2001)
- X-Ray Images of Hot Accretion Flows. *Feryal Özel & Tiziana Di Matteo.* 548, 213 (2001)
- The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation. *D. L. Meier.* 548, L9 (2001)
- GALAXIES: PECULIAR**
- The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux.* 546, L97 (2001)
- GALAXIES: PHOTOMETRY**
- NICMOS Observations of Low-Redshift Quasar Host Galaxies. *K. K. McLeod & B. A. McLeod.* 546, 782 (2001)
- NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen.* 546, 952 (2001)
- A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and H $\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)
- GALAXIES: QUASARS: ABSORPTION LINES**
- The Intrinsic Absorber in QSO 2359-1241: KECK and Hubble Space Telescope Observations. *Nahum Arav, Michael S. Brotherton, Robert H. Becker, Michael D. Gregg, Richard L. White, Trevor Price, & Warren Hack.* 546, 140 (2001)
- Heavy X-Ray Absorption in Soft X-Ray-Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyomoto.* 546, 795 (2001)
- Where Are the Absorbers toward Q2302+029? *David V. Bowen, Raul Jimenez, Edward B. Jenkins, & Max Pettini.* 547, 39 (2001)
- A New Interpretation of Chain Galaxies at High Redshift. *Yoshiaki Taniguchi & Yasuhiro Shioya.* 547, 146 (2001)
- The Maximum Effect of Thermal Instability on Galactic Outflows. *Yutaka Fujita.* 547, 162 (2001)
- H $2$ , C I, Metallicity, and Dust Depletion in the  $z = 2.34$  Damped Ly $\alpha$  Absorption System toward QSO 1232+0815. *Jian Ge, Jill Bechtold, & Varsha P. Kulkarni.* 547, L1 (2001)
- Quasar Absorption Lines as a Function of Quasar Orientation Measures. *Gordon T. Richards, S. A. Laurent-Muehleisen, Robert H. Becker, & Donald G. York.* 547, 635 (2001)
- Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent.* 548, 592 (2001)
- Keck HIRES Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. *Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista.* 548, 609 (2001)
- GALAXIES: QUASARS: EMISSION LINES**
- QSO 2359-1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack.* 546, 134 (2001)
- The Narrow-Line Region of Seyfert Galaxies: Narrow-Line Seyfert 1 Galaxies versus Broad-Line Seyfert 1 Galaxies. *Tohru Nagao, Takashi Murayama, & Yoshiaki Taniguchi.* 546, 744 (2001)
- Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky.* 546, 759 (2001)
- Composite Spectra from the FIRST Bright Quasar Survey. *M. S. Brotherton, Hien D. Tran, R. H. Becker, Michael D. Gregg, S. A. Laurent-Muehleisen, & R. L. White.* 546, 775 (2001)
- GALAXIES: QUASARS: GENERAL**
- QSO 2359-1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack.* 546, 134 (2001)
- Composite Spectra from the FIRST Bright Quasar Survey. *M. S. Brotherton, Hien D. Tran, R. H. Becker, Michael D. Gregg, S. A. Laurent-Muehleisen, & R. L. White.* 546, 775 (2001)
- NICMOS Observations of Low-Redshift Quasar Host Galaxies. *K. K. McLeod & B. A. McLeod.* 546, 782 (2001)
- Quasar Clustering and the Lifetime of Quasars. *Paul Martini & David H. Weinberg.* 547, 12 (2001)
- Constraining the Lifetime of Quasars from Their Spatial Clustering. *Zoltán Haiman & Lam Hui.* 547, 27 (2001)
- Accretion Disk Instabilities, Cold Dark Matter Models, and Their Role in Quasar Evolution. *Evanthia Hatziminaoglou, Aneta Siemiginowska, & Martin Elvis.* 547, 90 (2001)
- Radio-quiet Quasars in the Direction of the Northern Hubble Deep Field. *Chris Impey & Cathy Petry.* 547, 117 (2001)
- Near-Infrared Imaging of the Host Galaxies of Three Radio-loud Quasars at  $z \sim 1.5$ . *Renato Falomo, Jari Kotilainen, & Aldo Treves.* 547, 124 (2001)
- Superclustering of Faint Galaxies in the Field of a QSO Concentration at  $z \sim 1.1$ . *Ichi Tanaka, Toru Yamada, Edwin L. Turner, & Yasushi Suto.* 547, 521 (2001)
- Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad.* 547, 667 (2001)
- The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation. *D. L. Meier.* 548, L9 (2001)
- GALAXIES: QUASARS: INDIVIDUAL**
- Alphanumeric: FIRST J104459.6+365605**
- Keck HIRES Observations of the QSO FIRST J104459.6+365605: Evidence for a Large-Scale Outflow. *Martijn de Kool, Nahum Arav, Robert H. Becker, Michael D. Gregg, Richard L. White, Sally A. Laurent-Muehleisen, Trevor Price, & Kirk T. Korista.* 548, 609 (2001)



**Alphanumeric: PKS 2215+020**

Relativistic Effects on Neutrino Pair Annihilation above a Kerr Black Hole with the Accretion Disk. *Katsuaki Asano & Takeshi Fukuyama.* 546, 1019 (2001)

VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . *A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth.* 547, 714 (2001)

**Alphanumeric: Q1741-038**

The Extreme Scattering Event toward 1741-038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston.* 546, 267 (2001)

**Alphanumeric: Q2237+0305**

Evidence for a Source Size of Less Than 2000 AU in Quasar 2237+0305. *Atsunori Yonehara.* 548, L127 (2001)

**Alphanumeric: Q2302+029**

Where Are the Absorbers toward Q2302+029? *David V. Bowen, Raul Jimenez, Edward B. Jenkins, & Max Pettini.* 547, 39 (2001)

**Alphanumeric: QSO J2359-1241**

QSO 2359-1241: A Bright, Highly Polarized, Radio-moderate, Reddened, Low-Ionization Broad Absorption Line Quasar. *M. S. Brotherton, Nahum Arav, R. H. Becker, Hien D. Tran, Michael D. Gregg, R. L. White, S. A. Laurent-Muehleisen, & Warren Hack.* 546, 134 (2001)

The Intrinsic Absorber in QSO 2359-1241: KECK and Hubble Space Telescope Observations. *Nahum Arav, Michael S. Brotherton, Robert H. Becker, Michael D. Gregg, Richard L. White, Trevor Price, & Warren Hack.* 546, 140 (2001)

**Alphanumeric: RX 0921+4529**

Multifrequency Analysis of the New Wide-Separation Gravitational Lens Candidate RX J0921+4529. *J. A. Muñoz, E. E. Falco, C. S. Kochanek, J. Lehar, B. A. McLeod, B. R. McNamara, A. A. Vikhlinin, C. D. Impey, H.-W. Rix, C. R. Keeton, C. Y. Peng, & C. R. Mullis.* 546, 769 (2001)

**GALAXIES: SEYFERT**

The Broad-Line and Narrow-Line Regions of the LINER NGC 4579. *Aaron J. Barth, Luis C. Ho, Alexei V. Filippenko, Hans-Walter Rix, & Wallace L. W. Sargent.* 546, 205 (2001)

X-Ray Imaging of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L9 (2001)

High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L13 (2001)

The Narrow-Line Region of Seyfert Galaxies: Narrow-Line Seyfert 1 Galaxies versus Broad-Line Seyfert 1 Galaxies. *Tohru Nagao, Takashi Murayama, & Yoshiaki Taniguchi.* 546, 744 (2001)

Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky.* 546, 759 (2001)

The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst-Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer.* 546, 845 (2001)

Ionization, Extinction, and Spiral Structure in the Inner Disk of NGC 1068. *Fred C. Bruhweiler, Cherie L. Miskey, A. M. Smith, Wayne Landsman, & Eliot Malumuth.* 546, 866 (2001)

Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Katal G. Ghosh, Douglas A. Swartz, & Brian D. Ramsey.* 546, L91 (2001)

The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux.* 546, L97 (2001)

The Multitude of Unresolved Continuum Sources at 1.6 Microns in Hubble Space Telescope Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke.* 547, 129 (2001)

An RXTE Survey of Long-Term X-Ray Variability in Seyfert 1 Galaxies. *A. Markowitz & R. Edelson.* 547, 684 (2001)

Evidence for Rapid Iron K $\alpha$  Line Flux Variability in MGC -6-30-15. *Simon Vaughan & Rick Edelson.* 548, 694 (2001)

**GALAXIES: SPIRAL**

The Discovery of a Giant H $\alpha$  Filament in NGC 7213. *Salman Hameed, David L. Blank, Lisa M. Young, & Nick Devereux.* 546, L97 (2001)

The Multitude of Unresolved Continuum Sources at 1.6 Microns in Hubble Space Telescope Images of Seyfert Galaxies. *A. C. Quillen, Colleen McDonald, A. Alonso-Herrero, Ariane Lee, Shanna Shaked, M. J. Rieke, & G. H. Rieke.* 547, 129 (2001)

Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)

Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. *A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro.* 547, L119 (2001)

The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. *Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes.* 548, 97 (2001)

Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. *L. D. Matthews & Kenneth Wood.* 548, 150 (2001)

WFPC2 Observations of Massive and Compact Young Star Clusters in M31. *Benjamin F. Williams & Paul W. Hodge.* 548, 190 (2001)

**GALAXIES: STARBURST**

Starbursts in Multiple Galaxy Mergers. *Kenji Bekki.* 546, 189 (2001)

VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population. *P. M. Vreeswijk, A. Fruchter, L. Kaper, E. Rol, T. J. Galama, J. van Paradijs, C. Kouveliotou, R. A. M. J. Wijers, E. Pian, E. Palazzi, N. Masetti, F. Frontera, S. Savaglio, K. Reinsch, F. V. Hessman, K. Beuermann, H. Nicklas, & E. P. J. van den Heuvel.* 546, 672 (2001)

Star Formation History in the NICMOS Northern Hubble Deep Field. *Rodger I. Thompson, Ray J. Weymann, & Lisa J. Storrie-Lombardi.* 546, 694 (2001)

Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631. *Andrew M. Smith, Nicholas R. Collins, William H. Waller, Morton S. Roberts, Denise A. Smith, Ralph C. Bohlin, K.-P. Cheng, Michael N. Fanelli, Susan G. Neff, Robert W. O'Connell, Ronald A. Parise, Eric P. Smith, & Theodore P. Stecher.* 546, 829 (2001)

The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst-Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer.* 546, 845 (2001)

A New Interpretation of Chain Galaxies at High Redshift. *Yoshiaki Taniguchi & Yasuhiro Shioya.* 547, 146 (2001)

LRG J0239-0134: A Ring Galaxy or a Pair of Superbubbles at  $z = 1$ ? *Yoshiaki Taniguchi & Takashi Murayama.* 547, L13 (2001)

Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the Chandra High-Resolution Camera. *H. Matsumoto, T. G. Tsuru, K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe.* 547, L25 (2001)

Molecular Gas and the Modest Star Formation Efficiency in the "Antennae" Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee.* 548, 172 (2001)

On the Hidden Nuclear Starburst in Arp 220. *Yasuhiro Shioya, Neil Trentham, & Yoshiaki Taniguchi.* 548, L29 (2001)

High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle.* 548, 671 (2001)

**GALAXIES: STAR CLUSTERS**

The Galactic Center He I Stars: Remains of a Dissolved Young Cluster? *Ortwin Gerhard.* 546, L39 (2001)

Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631. *Andrew M. Smith, Nicholas R. Collins, William H. Waller, Morton S. Roberts, Denise A. Smith, Ralph C. Bohlin, K.-P. Cheng, Michael N. Fanelli, Susan G. Neff, Robert W. O'Connell, Ronald A. Parise, Eric P. Smith, & Theodore P. Stecher.* 546, 829 (2001)

WFPC2 Observations of Massive and Compact Young Star Clusters in M31. *Benjamin F. Williams & Paul W. Hodge.* 548, 190 (2001)

# **GALAXIES: STATISTICS**

Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey.* 546, L91 (2001)

The Evolution of Population Gradients in Galaxy Clusters: The Butcher-Oemler Effect and Cluster Infall. *E. Ellingson, H. Lin, H. K. C. Yee, & R. G. Carlberg.* 547, 609 (2001)

# **GALAXIES: STELLAR CONTENT**

The Nuclear and Circumnuclear Stellar Population in Seyfert 2 Galaxies: Implications for the Starburst-Active Galactic Nucleus Connection. *Rosa M. González Delgado, Timothy Heckman, & Claus Leitherer.* 546, 845 (2001)

NGC 1614: A Laboratory for Starburst Evolution. *A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen.* 546, 952 (2001)

Emission Mechanisms in X-Ray-faint Galaxies. *Beth A. Brown & Joel N. Bregman.* 547, 154 (2001)

First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy. *K. A. Venn, D. J. Lennon, A. Kaufer, J. K. McCarthy, N. Przybilla, R. P. Kudritzki, M. Lemke, E. D. Skillman, & S. J. Smartt.* 547, 765 (2001)

WFP2 Observations of Massive and Compact Young Star Clusters in M31. *Benjamin F. Williams & Paul W. Hodge.* 548, 190 (2001)

Galaxy Mapping with the Sauron Integral-Field Spectrograph: The Star Formation History of NGC 4365. *Roger L. Davies, Harald Kuntschner, Eric Emsellem, R. Bacon, M. Bureau, C. Marcella Carollo, Y. Copin, Bryan W. Miller, G. Monnet, Reynier F. Peletier, E. K. Verolme, & P. Tim de Zeeuw.* 548, L33 (2001)

A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and H $\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)

The Role of Clustering of Subclumps in Bright Elliptical Galaxy Formation from a Low-Spin Seed Galaxy. *Daisuke Kawata.* 548, 703 (2001)

Structure of the Large Magellanic Cloud from 2MASS. *Martin D. Weinberg & Sergei Nikolaev.* 548, 712 (2001)

Stellar Spectroscopy Far beyond the Local Group. *Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla.* 548, L159 (2001)

# **GALAXIES: STRUCTURE**

The Stability of Disks in Cusped Potentials. *J. A. Sellwood & N. W. Evans.* 546, 176 (2001)

Starbursts in Multiple Galaxy Mergers. *Kenji Bekki.* 546, 189 (2001)

Hubble Space Telescope Optical-Near-Infrared Colors of Nearby  $R^{1/4}$  and Exponential Bulges. *C. Marcella Carollo, Massimo Stiavelli, P. Tim de Zeeuw, Marc Seigar, & Herwig Dejonghe.* 546, 216 (2001)

Toward an Alternative Way of Looking at Elliptical Galaxies: Case Studies for NGC 4649 and NGC 7097. *V. De Bruyne, H. Dejonghe, A. Pizzella, M. Bernardi, & W. W. Zeilinger.* 546, 903 (2001)

The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations. *Benjamin J. Weiner, T. B. Williams, J. H. van Gorkom, & J. A. Sellwood.* 546, 916 (2001)

The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid-Dynamical Models. *Benjamin J. Weiner, J. A. Sellwood, & T. B. Williams.* 546, 931 (2001)

Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey.* 546, L91 (2001)

Numerical Models of the Multiphase Interstellar Matter with Stellar Energy Feedback on a Galactic Scale. *Keiichi Wada & Colin A. Norman.* 547, 172 (2001)

Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)

High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle.* 548, 671 (2001)

The Role of Clustering of Subclumps in Bright Elliptical Galaxy Formation from a Low-Spin Seed Galaxy. *Daisuke Kawata.* 548, 703 (2001)

# **GALAXY: ABUNDANCES**

Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of  $r$ -Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert.* 547, 217 (2001)

A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. *Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy.* 547, L129 (2001)

AST/RO Observations of Atomic Carbon near the Galactic Center. *Roopesh Ojha, Antony A. Stark, Henry H. Hsieh, Adair P. Lane, Richard A. Chamberlin, Thomas M. Bania, Alberto D. Bolatto, James M. Jackson, & Gregory A. Wright.* 548, 253 (2001)

# **GALAXY: CENTER**

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Hot Horizontal-Branch Stars in the Galactic Bulge. I. *Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker.* 547, 240 (2001)

Radio Variability of Sagittarius A\*—A 106 Day Cycle. *Jun-Hui Zhao, G. C. Bower, & W. M. Goss.* 547, L29 (2001)

A Method to Measure the Ratio of Total to Selective Extinction toward Baade's Window. *Andrew Gould, Amelia Stutz, & Jay A. Frogel.* 547, 590 (2001)

A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. *Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy.* 547, L129 (2001)

AST/RO Observations of Atomic Carbon near the Galactic Center. *Roopesh Ojha, Antony A. Stark, Henry H. Hsieh, Adair P. Lane, Richard A. Chamberlin, Thomas M. Bania, Alberto D. Bolatto, James M. Jackson, & Gregory A. Wright.* 548, 253 (2001)

Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesús Martín-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodríguez-Fernández, & A. Fuente.* 548, L65 (2001)

The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube. *Geoffrey V. Bicknell & Jianke Li.* 548, L69 (2001)

# **GALAXY: EVOLUTION**

Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis.* 546, 248 (2001)

The Galactic Center He I Stars: Remains of a Dissolved Young Cluster? *Ortwin Gerhard.* 546, L39 (2001)

Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of  $r$ -Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert.* 547, 217 (2001)

# **GALAXY: FORMATION**

The Luminosity Function of Magnitude and Proper-Motion-selected Samples: The Case of White Dwarfs. *René A. Méndez & María Teresa Ruiz.* 547, 252 (2001)

Hierarchical Galaxy Formation and Substructure in the Galaxy's Stellar Halo. *James S. Bullock, Andrey V. Kravtsov, & David H. Weinberg.* 548, 33 (2001)

# **GALAXY: GLOBULAR CLUSTERS: GENERAL**

Star Counts across the Red Giant Branch Bump and Below. *G. Bono, S. Cassisi, M. Zoccali, & G. Piotto.* 546, L109 (2001)

Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren.* 548, 323 (2001)

# **GALAXY: GLOBULAR CLUSTERS: INDIVIDUAL**

## **NGC Number: NGC 6266**

Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo.* 548, L171 (2001)

## **NGC Number: NGC 6397**

Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo.* 548, L171 (2001)

## **NGC Number: NGC 6544**

A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne.* 546, L25 (2001)

Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo.* 548, L171 (2001)

## **NGC Number: NGC 6752**

Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo.* 548, L171 (2001)

**Name: Arches**

How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut.* 546, L101 (2001)

**Name: Quintuplet**

How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut.* 546, L101 (2001)

**GALAXY: HALO**

Constraints on Cold  $H_2$  Clouds from Gravitational Microlensing Searches. *R. R. Rafikov & B. T. Draine.* 547, 207 (2001)

Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of  $r$ -Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert.* 547, 217 (2001)

Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? *Sean G. Ryan, Timothy C. Beers, Toshitaka Kajino, & Katarina Rosolankova.* 547, 231 (2001)

A New (Old) Component of the Galaxy as the Origin of the Observed Large Magellanic Cloud Microlensing Events. *Evalyn I. Gates & Geza Gyuk.* 547, 786 (2001)

Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte.* 547, L133 (2001)

Hierarchical Galaxy Formation and Substructure in the Galaxy's Stellar Halo. *James S. Bullock, Andrey V. Kravtsov, & David H. Weinberg.* 548, 33 (2001)

The Critical Velocity Effect as a Cause for the  $H\alpha$  Emission from the Magellanic Stream. *C. Konz, H. Lesch, G. T. Birk, & H. Wiechen.* 548, 249 (2001)

Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data. *Michael Odenkirchen, Eva K. Grebel, Constance M. Rockosi, Walter Dehnen, Rodrigo Ibata, Hans-Walter Rix, Andrea Stolte, Christian Wolf, John E. Anderson, Jr., Neta A. Bahcall, Jon Brinkmann, István Csabai, G. Hennessy, Robert B. Hindsley, Željko Ivezić, Robert H. Lupton, Jeffrey A. Munn, Jeffrey R. Pier, Chris Stoughton, & Donald G. York.* 548, L165 (2001)

**GALAXY: KINEMATICS AND DYNAMICS**

A New Model for the Spiral Structure of the Galaxy. Superposition of 2- and 4-armed Patterns. *J. R. D. Lépine, Yu. N. Mishurov, & S. Yu. Dedikov.* 546, 234 (2001)

Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data. *Michael Odenkirchen, Eva K. Grebel, Constance M. Rockosi, Walter Dehnen, Rodrigo Ibata, Hans-Walter Rix, Andrea Stolte, Christian Wolf, John E. Anderson, Jr., Neta A. Bahcall, Jon Brinkmann, István Csabai, G. Hennessy, Robert B. Hindsley, Željko Ivezić, Robert H. Lupton, Jeffrey A. Munn, Jeffrey R. Pier, Chris Stoughton, & Donald G. York.* 548, L165 (2001)

**GALAXY: OPEN CLUSTERS AND ASSOCIATIONS: GENERAL**

An Empirical Procedure to Estimate Distances to Stellar Clusters. *Carlos Allende Prieto.* 547, 200 (2001)

**GALAXY: OPEN CLUSTERS AND ASSOCIATIONS: INDIVIDUAL****Messier Number: M35**

From the Top to the Bottom of the Main Sequence: A Complete Mass Function of the Young Open Cluster M35. *David Barrado y Navascués, John R. Stauffer, Jerome Bouvier, & Eduardo L. Martín.* 546, 1006 (2001)

**GALAXY: OPEN CLUSTERS AND ASSOCIATIONS: INDIVIDUAL****Name: Gould Belt**

Off-Beam Gamma-Ray Pulsars and Unidentified Egret Sources in the Gould Belt. *Alice K. Harding & Bing Zhang.* 548, L37 (2001)

**GALAXY: SOLAR NEIGHBORHOOD**

The Luminosity Function of Magnitude and Proper-Motion-selected Samples: The Case of White Dwarfs. *René A. Méndez & María Teresa Ruiz.* 547, 252 (2001)

The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus.* 547, 792 (2001)

**GALAXY: STRUCTURE**

A New Model for the Spiral Structure of the Galaxy. Superposition of 2- and 4-armed Patterns. *J. R. D. Lépine, Yu. N. Mishurov, & S. Yu. Dedikov.* 546, 234 (2001)

ASCA Observation of an "X-Ray Shadow" in the Galactic Plane. *Sangwook Park & Ken Ebisawa.* 547, 777 (2001)

The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus.* 547, 792 (2001)

Galactic Halo Substructure in the Sloan Digital Sky Survey: The Ancient Tidal Stream from the Sagittarius Dwarf Galaxy. *Rodrigo Ibata, Michael Irwin, Geraint F. Lewis, & Andrea Stolte.* 547, L133 (2001)

Detection of Massive Tidal Tails around the Globular Cluster Palomar 5 with Sloan Digital Sky Survey Commissioning Data. *Michael Odenkirchen, Eva K. Grebel, Constance M. Rockosi, Walter Dehnen, Rodrigo Ibata, Hans-Walter Rix, Andrea Stolte, Christian Wolf, John E. Anderson, Jr., Neta A. Bahcall, Jon Brinkmann, István Csabai, G. Hennessy, Robert B. Hindsley, Željko Ivezić, Robert H. Lupton, Jeffrey A. Munn, Jeffrey R. Pier, Chris Stoughton, & Donald G. York.* 548, L165 (2001)

**GAMMA RAYS: BURSTS**

The Near-Infrared and Multiwavelength Afterglow of GRB 000301C. *James E. Rhoads & Andrew S. Fruchter.* 546, 117 (2001)

The Jet and Circumburst Stellar Wind of GRB 980519. *A. O. Jaunsen, J. Hjorth, G. Björnsson, M. I. Andersen, H. Pedersen, K. Kjærnsmo, H. Korhonen, P. M. Sørensen, & E. Palazzi.* 546, 127 (2001)

On the Kinematics of GRB 980425 and Its Association with SN 1998bw. *Jay D. Salmonson.* 546, L29 (2001)

Prompt High-Energy Gamma-Ray Emission from Synchrotron Self-Compton Process in the Reverse Shocks of Gamma-Ray Bursts. *X. Y. Wang, Z. G. Dai, & T. Lu.* 546, L33 (2001)

VLT Spectroscopy of GRB 990510 and GRB 990712: Probing the Faint and Bright Ends of the Gamma-Ray Burst Host Galaxy Population. *P. M. Vreeswijk, A. Fruchter, L. Kaper, E. Rol, T. J. Galama, J. van Paradijs, C. Kouveliotou, R. A. M. J. Wijers, E. Pian, E. Palazzi, N. Masetti, F. Frontera, S. Savaglio, K. Reinsch, F. V. Hessman, K. Beuermann, H. Nicklas, & E. P. J. van den Heuvel.* 546, 672 (2001)

Relativistic Effects on Neutrino Pair Annihilation above a Kerr Black Hole with the Accretion Disk. *Katsuaki Asano & Takeshi Fukuyama.* 546, 1019 (2001)

Generic Difference between Early and Late Stages of BATSE Gamma-Ray Bursts. *Igor G. Mitrofanov, Maxim L. Litvak, Dmitriy S. Anfinov, Anton B. Sanin, Michael S. Briggs, William S. Paciesas, Geoffrey N. Pendleton, Robert D. Preece, & Charles A. Meegan.* 547, 334 (2001)

X-Ray Spectral Features from Gamma-Ray Bursts: Predictions of Progenitor Models. *Markus Böttcher & Chris L. Fryer.* 547, 338 (2001)

What is the Cosmic-Ray Luminosity of Our Galaxy? *Arnon Dar & A. De Rijula.* 547, L33 (2001)

Discovery of Two Relativistic Neutron Star-White Dwarf Binaries. *R. T. Edwards & M. Bailes.* 547, L37 (2001)

On the Energy of Gamma-Ray Bursts. *Deborah L. Freedman & Eli Waxman.* 547, 922 (2001)

Gravitational Microlensing of Gamma-Ray Burst Afterglows by Single and Binary Stars. *Shude Mao & Abraham Loeb.* 547, L97 (2001)

On the Association of Gamma-Ray Bursts with Massive Stars: Implications for Number Counts and Lensing Statistics. *Cristiano Porciani & Piero Madau.* 548, 522 (2001)

Effects of Luminosity Functions Induced by Relativistic Beaming on the Statistics of Cosmological Gamma-Ray Bursts. *Chunglee Kim, Heon-Young Chang, & Insu Yi.* 548, 532 (2001)

On the Hardness-Intensity Correlation in Gamma-Ray Burst Pulses. *Luis Borgonovo & Felix Ryde.* 548, 770 (2001)

On the Synchrotron Self-Compton Emission from Relativistic Shocks and Its Implications for Gamma-Ray Burst Afterglows. *Re'em Sari & Ann A. Esin.* 548, 787 (2001)

**GAMMA RAYS: OBSERVATIONS**

The TeV Energy Spectrum of Markarian 501 Measured with the Stereoscopic Telescope System of HEGRA during 1998 and 1999. *F. Aharonian, A. Akhperjanian, J. Barrio, K. Bernlöhr, H. Börs, H. Bojahr, O. Bolz, J. Contreras, J. Cortina, S. Denninghoff, V. Fonseca, J. Gonzalez, N. Göting, G. Heinzelmann, G. Hermann, A. Heusler, W. Hofmann, D. Horns, C. Iserlohe, A. Ibarra, I. Jung, R. Kankanyan, M. Kestel, J. Kettler, A. Kohnle, A. Konopelko, H. Körmeyer, D. Kranich, H. Krawczynski, H. Lampeitl, E. Lorenz, F. Lucarelli, N. Magnussen,*



- O. Mang, H. Meyer, R. Mirzoyan, A. Moralejo, L. Padilla, M. Panter, R. Plaga, A. Plyasheshnikov, J. Prah, G. Pühlhofer, A. Röhring, W. Rhode, G. P. Rowell, V. Sahakian, M. Samorski, M. Schilling, F. Schröder, M. Siems, W. Stamm, M. Tluczykont, H. Völck, C. Wiedner, & W. Wittek. 546, 898 (2001)
- Neutrino Astronomy with the MACRO Detector. M. Ambrosio, R. Antolini, G. Auremma, D. Bakari, A. Baldini, G. C. Barbarino, B. C. Barish, G. Battistoni, R. Bellotti, C. Bemporad, P. Bernardini, H. Bilokon, V. Bisi, C. Bloise, C. Bower, M. Brigida, S. Bussino, F. Cafagna, M. Calicchio, D. Campana, M. Carboni, S. Cecchini, F. Cei, V. Chiarella, B. C. Choudhary, S. Coutu, G. De Cataldo, H. Dekhissi, C. De Marzo, I. De Mitri, J. Derkaoui, M. De Vincenzi, A. di Credico, O. Erriquez, C. Favuzzi, C. Forti, P. Fusco, G. Giacomelli, G. Giannini, N. Giglietto, M. Giorgini, M. Grassi, L. Gray, A. Grillo, F. Guarino, C. Gustavino, A. Habig, K. Hanson, R. Heinz, E. Iarocci, E. Katsavounidis, I. Katsavounidis, E. Kearns, H. Kim, S. Kyriazopoulou, E. Lamanna, C. Lane, D. S. Levin, P. Lipari, N. P. Longley, M. J. Longo, F. Loparco, F. Maaroufi, G. Mancarella, G. Mandrioli, S. Manzoor, A. Margiotta, A. Marini, D. Martello, A. Marzari-Chiesa, M. N. Mazzotta, D. G. Michael, S. Mikheyev, L. Miller, P. Monacelli, T. Montaruli, M. Monteno, S. Mufson, J. Musser, D. Nicolò, R. Noly, C. Okada, C. Orth, G. Osteria, M. Ouchrif, O. Palamara, V. Patera, L. Patrizzi, R. Pazzi, C. W. Peck, L. Perrone, S. Pettera, P. Pistilli, V. Popa, A. Rainò, J. Reynoldson, F. Ronga, C. Satriano, L. Satta, E. Scapparone, K. Scholberg, A. Sciubba, P. Serra, M. Sioli, M. Sitta, P. Spinelli, M. Spinetti, M. Spurio, R. Steinberg, J. L. Stone, L. R. Sulak, A. Surdo, G. Tarlé, V. Togo, M. Vakil, E. Vilela, C. W. Walter, & R. Webb. 546, 1038 (2001)
- A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. J. P. Halpern, E. V. Gotthelf, K. M. Leighly, & D. J. Helfand. 547, 323 (2001)
- What is the Cosmic-Ray Luminosity of Our Galaxy? Arnon Dar & A. De Rújula. 547, L33 (2001)
- High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment. S. Oser, D. Bhattacharya, L. M. Boone, M. C. Chantrell, Z. Conner, C. E. Couvaut, M. Dragovan, P. Fortin, D. T. Gregorich, D. S. Hanna, R. Mukherjee, R. A. Ong, K. Ragan, R. A. Scalzo, D. R. Schuette, C. G. Theoret, T. O. Tümer, D. A. Williams, & J. A. Zweerink. 547, 949 (2001)
- A Neutron Star Identification for the High-Energy Gamma-Ray Source 3EG J1835+5918 Detected in the ROSAT All-Sky Survey. N. Mirabel & J. P. Halpern. 547, L137 (2001)
- Search for Short Variability Timescale of the GeV Gamma-Ray–loud Blazars. G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing. 548, 200 (2001)
- Off-Beam Gamma-Ray Pulsars and Unidentified Egret Sources in the Gould Belt. Alice K. Harding & Bing Zhang. 548, L37 (2001)
- On the Hardness-Intensity Correlation in Gamma-Ray Burst Pulses. Luis Borgonovo & Felix Ryde. 548, 770 (2001)
- GAMMA RAYS: THEORY**
- On the Kinematics of GRB 980425 and Its Association with SN 1998bw. Jay D. Salmonson. 546, L29 (2001)
- On the Energy of Gamma-Ray Bursts. Deborah L. Freedman & Eli Waxman. 547, 922 (2001)
- Photon Splitting and Pair Creation in Highly Magnetized Pulsars. Matthew G. Baring & Alice K. Harding. 547, 929 (2001)
- Off-Beam Gamma-Ray Pulsars and Unidentified Egret Sources in the Gould Belt. Alice K. Harding & Bing Zhang. 548, L37 (2001)
- GRAVITATION**
- Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb. 546, 1098 (2001)
- How Many Young Star Clusters Exist in the Galactic Center? Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut. 546, L101 (2001)
- Nonlinear Gravitational Growth of Large-Scale Structures inside and outside Standard Cosmology. E. Gaztañaga & J. A. Lobo. 548, 47 (2001)
- Relativistic Diskoseismology. II. Analytical Results for c-Modes. Alexander S. Silbergleit, Robert V. Wagoner, & Manuel Ortega-Rodríguez. 548, 335 (2001)
- Evolution of Differentially Rotating Supermassive Stars to the Onset of Bar Instability. Kimberly C. B. New & Stuart L. Shapiro. 548, 439 (2001)
- Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro. 548, 919 (2001)
- GRAVITATIONAL LENSING**
- A New (Old) Component of the Galaxy as the Origin of the Observed Large Magellanic Cloud Microlensing Events. Evalyn I. Gates & Geza Gyuk. 547, 786 (2001)
- Gravitational Microlensing of Gamma-Ray Burst Afterglows by Single and Binary Stars. Shude Mao & Abraham Loeb. 547, L97 (2001)
- Weak Gravitational Lensing Bispectrum. Asantha Cooray & Wayne Hu. 548, 7 (2001)
- Weak-Lensing Study of Low-Mass Galaxy Groups: Implications for  $\Omega_m$ . H. Hoekstra, M. Franz, K. Kuijken, R. G. Carlberg, H. K. C. Yee, H. Lin, S. L. Morris, P. B. Hall, D. R. Patton, M. Sawicki, & G. D. Wirth. 548, L5 (2001)
- On the Association of Gamma-Ray Bursts with Massive Stars: Implications for Number Counts and Lensing Statistics. Cristiano Porciani & Piero Madau. 548, 522 (2001)
- HYDRODYNAMICS**
- The Evolution of X-Ray Clusters and the Entropy of the Intracluster Medium. Paolo Tozzi & Colin Norman. 546, 63 (2001)
- Nonlinear Growth of the Three-dimensional Undular Instability of a Horizontal Magnetic Layer and the Formation of Arching Flux Tubes. Y. Fan. 546, 509 (2001)
- The Orbital Structure of Dark Matter Halos with Gas. Andisheh Mahdavi. 546, 812 (2001)
- The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid-Dynamical Models. Benjamin J. Weiner, J. A. Sellwood, & T. B. Williams. 546, 931 (2001)
- The Metal Enrichment and Temperature of the Intergalactic Medium. Renyue Cen & Greg L. Bryan. 546, L81 (2001)
- Dynamical Effects of Global Thermal Instability in Shock-compressed Gas Slabs. M. Yamada & R. Nishi. 547, 99 (2001)
- Three-dimensional Simulations of a Planet Embedded in a Protoplanetary Disk. Wilhelm Kley, Gennaro D'Angelo, & Thomas Henning. 547, 457 (2001)
- Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using Hubble Space Telescope Ly $\alpha$  Spectra. Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank. 547, L49 (2001)
- On the Initial Mass Function of Population III Stars. Fumitaka Nakamura & Masayuki Umemura. 548, 19 (2001)
- Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren. 548, 323 (2001)
- Relativistic Diskoseismology. II. Analytical Results for c-Modes. Alexander S. Silbergleit, Robert V. Wagoner, & Manuel Ortega-Rodríguez. 548, 335 (2001)
- The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation. D. L. Meier. 548, L9 (2001)
- Simulations of Pregalactic Structure Formation with Radiative Feedback. Marie E. Machacek, Greg L. Bryan, & Tom Abel. 548, 509 (2001)
- Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro. 548, 919 (2001)
- INFRARED: GALAXIES**
- NICMOS Observations of Low-Redshift Quasar Host Galaxies. K. K. McLeod & B. A. McLeod. 546, 782 (2001)
- NGC 1614: A Laboratory for Starburst Evolution. A. Alonso-Herrero, C. W. Engelbracht, M. J. Rieke, G. H. Rieke, & A. C. Quillen. 546, 952 (2001)
- Near-Infrared Imaging of the Host Galaxies of Three Radio-loud Quasars at  $z \sim 1.5$ . Renato Falomo, Jari Kotilainen, & Aldo Treves. 547, 124 (2001)
- Molecular Gas and the Modest Star Formation Efficiency in the "Antennae" Galaxies: Arp 244=NGC 4038/39. Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee. 548, 172 (2001)
- INFRARED: GENERAL**
- Infrared Space Observatory's Discovery of C<sub>4</sub>H<sub>2</sub>, C<sub>6</sub>H<sub>2</sub>, and Benzene in CRL 618. José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters. 546, L123 (2001)

- Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters.* 546, L127 (2001)
- Stellar Variability in the Metal-rich, Obscured Globular Cluster Terzan 5. *Peter D. Edmonds, Jonathan E. Grindlay, Haldan Cohn, & Phyllis Lugger.* 547, 829 (2001)
- INFRARED: ISM**
- Observation of the Unidentified Infrared Bands in the Laboratory: Anti-Stokes Stimulated Raman Spectroscopy of a Rydberg Matter Surface Boundary Layer. *Leif Holmlid.* 548, L249 (2001)
- INFRARED: ISM: LINES AND BANDS**
- Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium. *Kin-Wing Chan, T. L. Roellig, T. Onaka, M. Mizutani, K. Okumura, I. Yamamura, T. Tanabé, H. Shibai, T. Nakagawa, & H. Okuda.* 546, 273 (2001)
- A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio.* 547, 292 (2001)
- Near-Infrared Imaging and O I Spectroscopy of IC 443 Using 2MASS and Infrared Space Observatory. *Jeonghee Rho, T. H. Jarrett, R. M. Cutri, & W. T. Reach.* 547, 885 (2001)
- A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr.* 547, L161 (2001)
- The Abundances of Solid N<sub>2</sub> and Gaseous CO<sub>2</sub> in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira.* 548, 836 (2001)
- Vibrational Spectra of Hydrogenated Buckminsterfullerene: A Candidate for the Unidentified Infrared Emission. *C. R. Stoldt, R. Maboudian, & C. Carraro.* 548, L225 (2001)
- INFRARED: SOLAR SYSTEM**
- A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory. *M. J. Mumma, I. S. McLean, M. A. DiSantil, J. E. Larkin, N. Dello Russo, K. Magee-Sauer, E. E. Becklin, T. Bida, F. Chaffee, A. R. Conrad, D. F. Figer, A. M. Gilbert, J. R. Graham, N. A. Levenson, R. E. Novak, D. C. Reuter, H. I. Teplitz, M. K. Wilcox, & Li-Hong Xu.* 546, 1183 (2001)
- INFRARED: STARS**
- Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn.* 546, 279 (2001)
- Ages of A-Type Vega-like Stars from uvby $\beta$  Photometry. *Inseok Song, J.-P. Caillaud, David Barrado y Navascués, & John R. Stauffer.* 546, 352 (2001)
- Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub.* 546, 358 (2001)
- A Sensitive Search for Methane in the Infrared Spectrum of  $\tau$  Bootis. *Günter Wiedemann, Drake Deming, & Gordon Bjoraker.* 546, 1068 (2001)
- Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. *Magnus Gustafsson & Lothar Frommhold.* 546, 1168 (2001)
- Modeling CO Emission from Mira's Wind. *N. Ryde & F. L. Schöier.* 547, 384 (2001)
- Periodic Photometric Variability in the Becklin-Neugebauer Object. *Lynne A. Hillenbrand, John M. Carpenter, & M. F. Skrutskie.* 547, L53 (2001)
- Structure of the Large Magellanic Cloud from 2MASS. *Martin D. Weinberg & Sergei Nikolaev.* 548, 712 (2001)
- Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. *K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler.* 548, 861 (2001)
- Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschildt, & Andreas Schweitzer.* 548, 908 (2001)
- Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman.* 548, 1020 (2001)
- INSTABILITIES**
- The Stability of Disks in Cusped Potentials. *J. A. Sellwood & N. W. Evans.* 546, 176 (2001)
- Gravity Modes in ZZ Ceti Stars. IV. Amplitude Saturation by Parametric Instability. *Yanqin Wu & Peter Goldreich.* 546, 469 (2001)
- Magnetic Reconnection Induced by Convective Intensification of Solar Photospheric Magnetic Fields. *Akitugu Takeuchi & Kazunari Shibata.* 546, L73 (2001)
- r-Modes of Neutron Stars with a Solid Crust. *Shijun Yoshida & Umin Lee.* 546, 1121 (2001)
- Dynamical Effects of Global Thermal Instability in Shock-compressed Gas Slabs. *M. Yamada & R. Nishi.* 547, 99 (2001)
- Nonlinear Gravitational Growth of Large-Scale Structures inside and outside Standard Cosmology. *E. Gaztañaga & J. A. Lobo.* 548, 47 (2001)
- Instabilities in a Nonuniform Partially Ionized Isothermal Magnetoplasma. *A. A. Mamun & P. K. Shukla.* 548, 269 (2001)
- Global MHD Simulation of the Inner Accretion Disk in a Pseudo-Newtonian Potential. *John F. Hawley & Julian H. Krolik.* 548, 348 (2001)
- Evolution of Differentially Rotating Supermassive Stars to the Onset of Bar Instability. *Kimberly C. B. New & Stuart L. Shapiro.* 548, 439 (2001)
- Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson.* 548, 492 (2001)
- Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. *Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro.* 548, 919 (2001)
- Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. *Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath.* 548, L193 (2001)
- INSTRUMENTATION: INTERFEROMETERS**
- Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub.* 546, 358 (2001)
- The SIGMA/Granat Telescope: Calibration and Data Reduction. *L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul.* 548, 990 (2001)
- Detection of Earth-like Planets Using Apodized Telescopes. *Peter Nisenson & Costas Papaliolios.* 548, L201 (2001)
- INTERPLANETARY MEDIUM**
- Coronal Inflows and the Sun's Nonaxisymmetric Open Flux. *N. R. Sheeley, Jr., T. N. Knudson, & Y.-M. Wang.* 546, L131 (2001)
- ISM: ABUNDANCES**
- Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis.* 546, 248 (2001)
- Chemical Differentiation in Regions of Massive Star Formation. *S. D. Rodgers & S. B. Charnley.* 546, 324 (2001)
- On the Timescale for the Formation of Protostellar Cores in Magnetic Interstellar Clouds. *Glenn E. Ciolek & Shantanu Basu.* 547, 272 (2001)
- Observations of DNC and HN<sup>13</sup>C in Dark Cloud Cores. *Tomoya Hirota, Masafumi Ikeda, & Satoshi Yamamoto.* 547, 814 (2001)
- Absorption of Ti II Vacuum Ultraviolet Resonance Transitions. *L. M. Wiese, J. A. Fedchak, & J. E. Lawler.* 547, 1178 (2001)
- Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia.* 547, L155 (2001)
- A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr.* 547, L161 (2001)
- Two New Ejecta-dominated Galactic Supernova Remnants: G337.2-0.7 and G309.2-0.6. *Cara E. Rakowski, John P. Hughes, & Patrick Slane.* 548, 258 (2001)
- Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodriguez-Fernandez, & A. Fuente.* 548, L65 (2001)
- The Abundances of Solid N<sub>2</sub> and Gaseous CO<sub>2</sub> in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira.* 548, 836 (2001)
- The Abundance and Emission of H<sub>2</sub>O and O<sub>2</sub> in Clumpy Molecular Clouds. *Marco Spaans & Ewine F. van Dishoeck.* 548, L217 (2001)
- Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali.* 548, L253 (2001)

## ISM: ATOMS

- STIS and GHRs Observations of Warm and Hot Gas Overlying the Stutum Supershell (GS 018-04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk*. 547, 907 (2001)
- Observation of the C I  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region. *Satoshi Yamamoto, Hiroyuki Maezawa, Masafumi Ikeda, Tetsuya Ito, Tomoharu Oka, Gaku Saito, Mitsuhiro Iwata, Kazuhisa Kamegai, Takeshi Sakai, Yutaro Sekimoto, Ken'ichi Tatematsu, Takashi Noguchi, Sheng-Cai Shi, Yuji Arikawa, Yoshiyuki Aso, Keisuke Miyazawa, Shuji Saito, Hideo Fujiwara, Masatoshi Ohishi, Hiroyuki Ozeki, & Junji Inatani*. 547, L165 (2001)
- Reactions of  $C_n^-$  and  $C_nH^-$  with Atomic and Molecular Hydrogen. *Cynthia Barckholtz, Theodore P. Snow, & Veronica M. Bierbaum*. 547, L171 (2001)
- AST/RO Observations of Atomic Carbon near the Galactic Center. *Roopesh Ojha, Antony A. Stark, Henry H. Hsieh, Adair P. Lane, Richard A. Chamberlin, Thomas M. Bania, Alberto D. Bolatto, James M. Jackson, & Gregory A. Wright*. 548, 253 (2001)
- Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Helou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi*. 548, L73 (2001)

## ISM: BUBBLES

- Supersonic Water Masers in 30 Doradus. *Jacco Th. van Loon & Albert A. Zijlstra*. 547, L61 (2001)
- A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel*. 547, 754 (2001)
- STIS and GHRs Observations of Warm and Hot Gas Overlying the Stutum Supershell (GS 018-04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk*. 547, 907 (2001)

## ISM: CLOUDS

- Chemical Differentiation in Regions of Massive Star Formation. *S. D. Rodgers & S. B. Charnley*. 546, 324 (2001)
- The Galactic Center He I Stars: Remains of a Dissolved Young Cluster? *Orwin Gerhard*. 546, L39 (2001)
- Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models. *Eve C. Ostriker, James M. Stone, & Charles F. Gammie*. 546, 980 (2001)
- Constraints on Cold H<sub>2</sub> Clouds from Gravitational Microlensing Searches. *R. R. Rafikov & B. T. Draine*. 547, 207 (2001)
- Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of r-Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert*. 547, 217 (2001)
- On the Timescale for the Formation of Protostellar Cores in Magnetic Interstellar Clouds. *Glenn E. Ciolek & Shantanu Basu*. 547, 272 (2001)
- Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence. *Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen*. 547, 280 (2001)
- The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. *Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida*. 547, 311 (2001)
- An Empirical Model for Protostellar Collapse. *A. P. Whitworth & D. Ward-Thompson*. 547, 317 (2001)
- The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus*. 547, 792 (2001)
- An H<sup>13</sup>CO<sup>+</sup> Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada*. 547, 840 (2001)
- A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. *Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy*. 547, L129 (2001)
- A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr*. 547, L161 (2001)
- Observation of the C I  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region. *Satoshi Yamamoto, Hiroyuki Maezawa, Masafumi Ikeda, Tetsuya Ito, Tomoharu Oka, Gaku Saito, Mitsuhiro Iwata, Kazuhisa Kamegai, Takeshi Sakai, Yutaro Sekimoto, Ken'ichi Tatematsu, Takashi Noguchi, Sheng-Cai Shi, Yuji Arikawa, Yoshiyuki Aso, Keisuke Miyazawa, Shuji Saito, Hideo Fujiwara, Masatoshi Ohishi, Hiroyuki Ozeki, & Junji Inatani*. 547, L165 (2001)
- On the Initial Mass Function of Population III Stars. *Fumitaka Nakamura & Masayuki Umemura*. 548, 19 (2001)

- The Critical Velocity Effect as a Cause for the H $\alpha$  Emission from the Magellanic Stream. *C. Konz, H. Lesch, G. T. Birk, & H. Wiechen*. 548, 249 (2001)
- Instabilities in a Nonuniform Partially Ionized Isothermal Magnetoplasma. *A. A. Mamun & P. K. Shukla*. 548, 269 (2001)
- Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe*. 548, 278 (2001)
- Dust Grain-Size Distributions and Extinction in the Milky Way, Large Magellanic Cloud, and Small Magellanic Cloud. *Joseph C. Weingartner & B. T. Draine*. 548, 296 (2001)
- Infall Models of Class 0 Protostars. *Ray Jayawardhana, Lee Hartmann, & Nuria Calvet*. 548, 310 (2001)
- A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungeun Kim, & Lister Staveley-Smith*. 548, 749 (2001)
- The Abundance and Emission of H<sub>2</sub>O and O<sub>2</sub> in Clumpy Molecular Clouds. *Marco Spaans & Ewine F. van Dishoeck*. 548, L217 (2001)
- Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali*. 548, L253 (2001)

## ISM: COSMIC RAYS

- Exact Expressions for the Critical Mach Numbers in the Two-Fluid Model of Cosmic-Ray-modified Shocks. *Peter A. Becker & Demosthenes Kazanas*. 546, 429 (2001)
- The Modified Weighted Slab Technique: Models and Results. *Frank C. Jones, Andrew Lukasiak, Vladimir Ptuskin, & William Webber*. 547, 264 (2001)
- What is the Cosmic-Ray Luminosity of Our Galaxy? *Arnon Dar & A. De Rújula*. 547, L33 (2001)
- Chandra X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. *A. S. Wilson, A. J. Young, & P. L. Shopbell*. 547, 740 (2001)
- The Contribution of Extreme Ultraviolet from Clusters of Galaxies to the Cosmic Ionizing Background. *Scott W. Randall & Craig L. Sarazin*. 548, 60 (2001)
- Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey. *Joshua C. Kempner & Craig L. Sarazin*. 548, 639 (2001)
- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Mathieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee*. 548, 1051 (2001)

## ISM: DUST, EXTINCTION

- The Jet and Circumburst Stellar Wind of GRB 980519. *A. O. Jaunsen, J. Hjorth, G. Björnsson, M. I. Andersen, H. Pedersen, K. Kjærsmo, H. Korhonen, P. M. Sørensen, & E. Palazzi*. 546, 127 (2001)
- Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nitler, Ernst Zinner, Roberto Gallino, Maria Lugano, & Roy S. Lewis*. 546, 248 (2001)
- Unidentified Infrared Emission Bands in the Diffuse Interstellar Medium. *Kin-Wing Chan, T. L. Roellig, T. Onaka, M. Mizutani, K. Okumura, I. Yamamura, T. Tanabé, H. Shibai, T. Nakagawa, & H. Okuda*. 546, 273 (2001)
- Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn*. 546, 279 (2001)
- NGC 1333-Protostars, Dust Shells, and Triggered Star Formation. *Göran Sandell & Lewis B. G. Knee*. 546, L49 (2001)
- On the Timescale for the Formation of Protostellar Cores in Magnetic Interstellar Clouds. *Glenn E. Ciolek & Shantanu Basu*. 547, 272 (2001)
- H<sub>2</sub>, C I, Metallicity, and Dust Depletion in the  $z = 2.34$  Damped Ly $\alpha$  Absorption System toward QSO 1232+0815. *Jian Ge, Jill Bechtold, & Varsha P. Kulkarni*. 547, L1 (2001)
- A Method to Measure the Ratio of Total to Selective Extinction toward Baade's Window. *Andrew Gould, Amelia Stutz, & Jay A. Frogel*. 547, 590 (2001)
- Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface. *D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy*. 547, 872 (2001)
- Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. *L. D. Matthews & Kenneth Wood*. 548, 150 (2001)



Dust Grain-Size Distributions and Extinction in the Milky Way, Large Magellanic Cloud, and Small Magellanic Cloud. *Joseph C. Weingartner & B. T. Draine*. 548, 296 (2001)

Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Helou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi*. 548, L73 (2001)

A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and H $\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)

Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman*. 548, 1020 (2001)

Vibrational Spectra of Hydrogenated Buckminsterfullerene: A Candidate for the Unidentified Infrared Emission. *C. R. Stoldt, R. Maboudian, & C. Carraro*. 548, L225 (2001)

#### ISM: GENERAL

Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the Chandra LETGS Spectrum of X0614+091. *Frits Paerels, A. C. Brinkman, R. L. J. van der Meer, J. S. Kaastra, E. Kuulkers, A. J. F. den Boggende, P. Predehl, Jeremy J. Drake, Steven M. Kahn, Daniel W. Savin, & Brendan M. McLaughlin*. 546, 338 (2001)

ASTRO Observations of Atomic Carbon near the Galactic Center. *Roopesh Ojha, Antony A. Stark, Henry H. Hsieh, Adair P. Lane, Richard A. Chamberlin, Thomas M. Bania, Alberto D. Bolatto, James M. Jackson, & Gregory A. Wright*. 548, 253 (2001)

Detection of N II  $\lambda$ 5755 Emission from Low-Density Ionized Interstellar Gas. *R. J. Reynolds, N. C. Sterling, L. M. Haffner, & S. L. Tufte*. 548, L221 (2001)

Observation of the Unidentified Infrared Bands in the Laboratory: Anti-Stokes Stimulated Raman Spectroscopy of a Rydberg Matter Surface Boundary Layer. *Leif Holmlid*. 548, L249 (2001)

#### ISM: H II REGIONS

Warm Dust Emission near W75 N IRS1: Evidence for Multiple Energetic Outflows. *D. S. Shepherd*. 546, 345 (2001)

A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. *J. P. Halpern, E. V. Gotthelf, K. M. Leighly, & D. J. Helfand*. 547, 323 (2001)

A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel*. 547, 754 (2001)

High-Resolution Spectroscopy of H II Galaxies: Structure and Supersonic Line Widths. *Eduardo Telles, Casiana Muñoz-Tuñón, & Guillermo Tenorio-Tagle*. 548, 671 (2001)

Detection of N II  $\lambda$ 5755 Emission from Low-Density Ionized Interstellar Gas. *R. J. Reynolds, N. C. Sterling, L. M. Haffner, & S. L. Tufte*. 548, L221 (2001)

#### ISM: HERBIG-HARO OBJECTS

Irradiated Herbig-Haro Jets in the Orion Nebula and near NGC 1333. *John Bally & Bo Reipurth*. 546, 299 (2001)

A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio*. 547, 292 (2001)

#### ISM: INDIVIDUAL

##### Name: Carina Nebula

Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia*. 547, L155 (2001)

##### Name: Crab Nebula

High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment. *S. Oser, D. Bhattacharya, L. M. Boone, M. C. Chantrell, Z. Conner, C. E. Couvaut, M. Dragovan, P. Fortin, D. T. Gregorich, D. S. Hanna, R. Mukherjee, R. A. Ong, K. Ragan, R. A. Scalzo, D. R. Schuette, C. G. Theoret, T. O. Tumer, D. A. Williams, & J. A. Zweerink*. 547, 949 (2001)

##### Name: 30 Doradus

Supersonic Water Masers in 30 Doradus. *Jacco Th. van Loon & Albert A. Zijlstra*. 547, L61 (2001)

##### Name: Heiles's cloud 2

The Effects of Noise and Sampling on the Spectral Correlation Function. *Paolo Padoan, Erik W. Rosolowsky, & Alyssa A. Goodman*. 547, 862 (2001)

##### Name: $\rho$ Ophiuchi

Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe*. 548, 278 (2001)

##### Name: Orion Kleinmann-Low

Observation of the C I  $^3P_2-^3P_1$  Line toward the Orion Kleinmann-Low Region. *Satoshi Yamamoto, Hiroyuki Maezawa, Masafumi Ikeda, Tetsuya Ito, Tomoharu Oka, Gaku Saito, Mitsuhiro Iwata, Kazuhisa Kamegai, Takeshi Sakai, Yutaro Sekimoto, Ken'ichi Tatematsu, Takashi Noguchi, Sheng-Cai Shi, Yuji Arikawa, Yoshiyuki Aso, Keisuke Miyazawa, Shuji Saito, Hideo Fujiwara, Masatoshi Ohishi, Hiroyuki Ozeki, & Junji Inatani*. 547, L165 (2001)

##### Name: Orion Nebula

Irradiated Herbig-Haro Jets in the Orion Nebula and near NGC 1333. *John Bally & Bo Reipurth*. 546, 299 (2001)

##### Name: Sagittarius B2

A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. *Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy*. 547, L129 (2001)

##### Name: Taurus Dark Cloud

Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface. *D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy*. 547, 872 (2001)

##### NGC Number: NGC 1333

Irradiated Herbig-Haro Jets in the Orion Nebula and near NGC 1333. *John Bally & Bo Reipurth*. 546, 299 (2001)

##### NGC Number: NGC 2071

The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. *Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida*. 547, 311 (2001)

##### Alphanumeric: G266.2-1.2

RJX 0852.0-0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2-1.2). *Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach*. 548, 814 (2001)

The X-Ray Sources at the Center of the Supernova Remnant RX J0852.0-4622. *S. Mereghetti*. 548, L213 (2001)

##### Alphanumeric: HH 80-81

A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio*. 547, 292 (2001)

##### Alphanumeric: IC 443

Near-Infrared Imaging and O I Spectroscopy of IC 443 Using 2MASS and Infrared Space Observatory. *Jeonghee Rho, T. H. Jarrett, R. M. Cutri, & W. T. Reach*. 547, 885 (2001)

##### Alphanumeric: IRAS 16293-2422

SiO Emission in the Multilobe Outflow Associated with IRAS 16293-2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi*. 547, 899 (2001)

##### Alphanumeric: L1544

An Empirical Model for Protostellar Collapse. *A. P. Whitworth & D. Ward-Thompson*. 547, 317 (2001)

##### Alphanumeric: RAFGL 618

Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn*. 546, 279 (2001)

##### Alphanumeric: RAFGL 2688

Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn*. 546, 279 (2001)

#### ISM: JETS AND OUTFLOWS

Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae. *Eric G. Blackman, Adam Frank, & Carl Welch*. 546, 288 (2001)

Irradiated Herbig-Haro Jets in the Orion Nebula and near NGC 1333. *John Bally & Bo Reipurth*. 546, 299 (2001)

Warm Dust Emission near W75 N IRS1: Evidence for Multiple Energetic Outflows. *D. S. Shepherd*. 546, 345 (2001)

NGC 1333-Protostars, Dust Shells, and Triggered Star Formation. *Göran Sandell & Lewis B. G. Knee*. 546, L49 (2001)

- Measurement of the Magnetic Field Direction in the NGC 2024 FIR 5 Protostellar Outflow. *J. S. Greaves, W. S. Holand, & D. Ward-Thompson.* 546, L53 (2001)
- A Shock-excited OH Maser in a Post-Asymptotic Giant Branch Envelope? *Maartje N. Sevenster & Jessica M. Chapman.* 546, L119 (2001)
- The Maximum Effect of Thermal Instability on Galactic Outflows. *Yutaka Fujita.* 547, 162 (2001)
- A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio.* 547, 292 (2001)
- Low-Ionization Structures in Planetary Nebulae: Confronting Models with Observations. *Denise R. Gonçalves, Romano L. M. Corradi, & Antonio Mampaso.* 547, 302 (2001)
- SiO Emission in the Multilobe Outflow Associated with IRAS 16293–2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi.* 547, 899 (2001)
- Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe.* 548, 278 (2001)
- Hubble Space Telescope Proper-Motion Measurements of the  $\eta$  Carinae Nebula. *Jon A. Morse, James R. Kellogg, John Bally, Kris Davidson, Bruce Balick, & Dennis Ebbets.* 548, L207 (2001)
- ISM: KINEMATICS AND DYNAMICS**
- The Maximum Effect of Thermal Instability on Galactic Outflows. *Yutaka Fujita.* 547, 162 (2001)
- Numerical Models of the Multiphase Interstellar Matter with Stellar Energy Feedback on a Galactic Scale. *Keiichi Wada & Colin A. Norman.* 547, 172 (2001)
- Inhomogeneous Chemical Evolution of the Galactic Halo: Abundance of  $r$ -Process Elements. *Claudia Travaglio, Daniele Galli, & Andreas Burkert.* 547, 217 (2001)
- Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence. *Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen.* 547, 280 (2001)
- Low-Ionization Structures in Planetary Nebulae: Confronting Models with Observations. *Denise R. Gonçalves, Romano L. M. Corradi, & Antonio Mampaso.* 547, 302 (2001)
- Supersonic Water Masers in 30 Doradus. *Jacco Th. van Loon & Albert A. Zijlstra.* 547, L61 (2001)
- A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel.* 547, 754 (2001)
- The Effects of Noise and Sampling on the Spectral Correlation Function. *Paolo Padoan, Erik W. Rosolowsky, & Alyssa A. Goodman.* 547, 862 (2001)
- Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia.* 547, L155 (2001)
- The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube. *Geoffrey V. Bicknell & Jianke Li.* 548, L69 (2001)
- ISM: LINES AND BANDS**
- A Measurement of the Rotational Spectrum of the CH Radical in the Far-Infrared. *Steven A. Davidson, Kenneth M. Evenson, & John M. Brown.* 546, 330 (2001)
- Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia.* 547, L155 (2001)
- Reactions of  $C_n^-$  and  $C_nH^-$  with Atomic and Molecular Hydrogen. *Cynthia Barchholtz, Theodore P. Snow, & Veronica M. Bierbaum.* 547, L171 (2001)
- Evidence for the Heating of Atomic Interstellar Gas by Polycyclic Aromatic Hydrocarbons. *George Helou, Sangeeta Malhotra, David J. Hollenbach, Daniel A. Dale, & Alessandra Contursi.* 548, L73 (2001)
- Observation of the Unidentified Infrared Bands in the Laboratory: Anti-Stokes Stimulated Raman Spectroscopy of a Rydberg Matter Surface Boundary Layer. *Leif Holmlid.* 548, L249 (2001)
- ISM: MAGNETIC FIELDS**
- Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae. *Eric G. Blackman, Adam Frank, & Carl Welch.* 546, 288 (2001)
- Measurement of the Magnetic Field Direction in the NGC 2024 FIR 5 Protostellar Outflow. *J. S. Greaves, W. S. Holand, & D. Ward-Thompson.* 546, L53 (2001)
- On the Timescale for the Formation of Protostellar Cores in Magnetic Interstellar Clouds. *Glenn E. Ciolek & Shantanu Basu.* 547, 272 (2001)
- Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence. *Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen.* 547, 280 (2001)
- The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. *Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida.* 547, 311 (2001)
- Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface. *D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy.* 547, 872 (2001)
- The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube. *Geoffrey V. Bicknell & Jianke Li.* 548, L69 (2001)
- Exact Solutions for Two-dimensional Steady Magnetic Reconnection in Partially Ionized Plasmas. *H. S. Ji, M. T. Song, & G. L. Huang.* 548, 1087 (2001)
- ISM: MOLECULES**
- Chemical Differentiation in Regions of Massive Star Formation. *S. D. Rodgers & S. B. Charnley.* 546, 324 (2001)
- A Measurement of the Rotational Spectrum of the CH Radical in the Far-Infrared. *Steven A. Davidson, Kenneth M. Evenson, & John M. Brown.* 546, 330 (2001)
- NGC 1333—Protostars, Dust Shells, and Triggered Star Formation. *Göran Sandell & Lewis B. G. Knee.* 546, L49 (2001)
- Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models. *Eve C. Ostriker, James M. Stone, & Charles F. Gammie.* 546, 980 (2001)
- Infrared Space Observatory's Discovery of  $C_4H_2$ ,  $C_6H_2$ , and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters.* 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters.* 546, L127 (2001)
- The Alignment of the Magnetic Field and Collimated Outflows in Star-forming Regions: The Case of NGC 2071. *Martin Houde, Thomas G. Phillips, Pierre Bastien, Ruisheng Peng, & Hiroshige Yoshida.* 547, 311 (2001)
- $H_2$ , C I, Metallicity, and Dust Depletion in the  $z = 2.34$  Damped Ly $\alpha$  Absorption System toward QSO 1232+0815. *Jian Ge, Jill Bechtold, & Varsha P. Kulkarni.* 547, L1 (2001)
- The Cyclic  $C_5H$  Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus.* 547, L65 (2001)
- The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus.* 547, 792 (2001)
- Observations of DNC and  $HN^{13}C$  in Dark Cloud Cores. *Tomoya Hirota, Masafumi Ikeda, & Satoshi Yamamoto.* 547, 814 (2001)
- An  $H^{13}CO^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada.* 547, 840 (2001)
- SiO Emission in the Multilobe Outflow Associated with IRAS 16293–2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi.* 547, 899 (2001)
- Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. *Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin.* 547, L115 (2001)
- A Direct Measurement of the CO Depletion in the Elias 18 Circumstellar Disk. *R. Y. Shuping, J. E. Chiar, Theodore P. Snow, & Thomas Kerr.* 547, L161 (2001)
- Reactions of  $C_n^-$  and  $C_nH^-$  with Atomic and Molecular Hydrogen. *Cynthia Barchholtz, Theodore P. Snow, & Veronica M. Bierbaum.* 547, L171 (2001)
- Molecular Gas and the Modest Star Formation Efficiency in the "Antennae" Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee.* 548, 172 (2001)
- ASTRO Observations of Atomic Carbon near the Galactic Center. *Roopesh Ojha, Antony A. Stark, Henry H. Hsieh, Adair P. Lane, Richard A. Chamberlin, Thomas M. Bania, Alberto D. Bolatto, James M. Jackson, & Gregory A. Wright.* 548, 253 (2001)
- Instabilities in a Nonuniform Partially Ionized Isothermal Magnetoplasma. *A. A. Mamun & P. K. Shukla.* 548, 269 (2001)

- Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe*. 548, 278 (2001)
- Large-Scale Grain Mantle Disruption in the Galactic Center. *Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodriguez-Fernandez, & A. Fuente*. 548, L65 (2001)
- The Abundances of Solid  $N_2$  and Gaseous  $CO_2$  in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira*. 548, 836 (2001)
- The Formation of  $C_5H_5$  Isomers as Potential Key Intermediates to Polycyclic Aromatic Hydrocarbon-like Molecules. *R. I. Kaiser, H. Y. Lee, A. M. Mebel, & Y. T. Lee*. 548, 852 (2001)
- The Abundance and Emission of  $H_2O$  and  $O_2$  in Clumpy Molecular Clouds. *Marco Spaans & Ewine F. van Dishoeck*. 548, L217 (2001)
- Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali*. 548, L253 (2001)
- ISM: PLANETARY NEBULAE: GENERAL**
- Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae. *Eric G. Blackman, Adam Frank, & Carl Welch*. 546, 288 (2001)
- Low-Ionization Structures in Planetary Nebulae: Confronting Models with Observations. *Denise R. Gonçalves, Romano L. M. Corradi, & Antonio Mampaso*. 547, 302 (2001)
- Morphology and Evolution of the Large Magellanic Cloud Planetary Nebulae. *Richard A. Shaw, Letizia Stanghellini, Max Mutchler, Bruce Balick, & J. Chris Blades*. 548, 727 (2001)
- ISM: PLANETARY NEBULAE: INDIVIDUAL**
- NGC Number: NGC 7293**
- Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). *L. López-Martín, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto*. 548, 288 (2001)
- ISM: STRUCTURE**
- The Extreme Scattering Event toward 1741-038: H I Absorption. *T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston*. 546, 267 (2001)
- Observability of Stellar Winds from Late-Type Dwarfs via Charge Exchange X-Ray Emission. *Bradford J. Wargelin & Jeremy J. Drake*. 546, L57 (2001)
- Numerical Models of the Multiphase Interstellar Matter with Stellar Energy Feedback on a Galactic Scale. *Keiichi Wada & Colin A. Norman*. 547, 172 (2001)
- ASCA Observation of an "X-Ray Shadow" in the Galactic Plane. *Sangwook Park & Ken Ebisawa*. 547, 777 (2001)
- STIS and GHRS Observations of Warm and Hot Gas Overlying the Stutum Supershell (GS 018-04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk*. 547, 907 (2001)
- Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). *L. López-Martín, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto*. 548, 288 (2001)
- A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungeun Kim, & Lister Staveley-Smith*. 548, 749 (2001)
- ISM: SUPERNOVA REMNANTS**
- The Radio Structure of the Supernova Remnant G315.4-2.3 (MSH 14-63). *John R. Dickel, Richard G. Strom, & D. K. Milne*. 546, 447 (2001)
- Accelerated Electrons in Cassiopeia A: An Explanation for the Hard X-Ray Tail. *J. Martin Laming*. 546, 1149 (2001)
- Chandra Observations of the Young Pulsar PSR B0540-69. *P. Kaaret, H. L. Marshall, T. L. Aldcroft, D. E. Graessle, M. Karovska, S. S. Murray, A. H. Rots, N. S. Schulz, & F. D. Seward*. 546, 1159 (2001)
- A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. *J. P. Halpern, E. V. Gotthelf, K. M. Leighly, & D. J. Helfand*. 547, 323 (2001)
- Upper Limits on Periodic, Pulsed Radio Emission from the X-Ray Point Source in Cassiopeia A. *M. A. McLaughlin, J. M. Cordes, A. A. Deshpande, B. M. Gaensler, T. H. Hankins, V. M. Kaspi, & J. S. Kern*. 547, L41 (2001)
- Does Pulsar B1757-24 Have a fallback Disk? *D. Marsden, R. E. Lingefelter, & R. E. Rothschild*. 547, L45 (2001)
- A Critical Examination of Hypernova Remnant Candidates in M101. I. MF 83. *Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel*. 547, 754 (2001)
- Near-Infrared Imaging and O I Spectroscopy of IC 443 Using 2MASS and Infrared Space Observatory. *Jeonghee Rho, T. H. Jarrett, R. M. Cutri, & W. T. Reach*. 547, 885 (2001)
- High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment. *S. Oser, D. Bhattacharya, L. M. Boone, M. C. Chantrell, Z. Conner, C. E. Couvaut, M. Dragovan, P. Fortin, D. T. Gregorich, D. S. Hanna, R. Mukherjee, R. A. Ong, K. Ragan, R. A. Scalzo, D. R. Schuette, C. G. Theoret, T. O. Toner, D. A. Williams, & J. A. Zweerink*. 547, 949 (2001)
- Balmer-dominated Spectra of Nonradiative Shocks in the Cygnus Loop, RCW 86, and Tycho Supernova Remnants. *Parviz Ghavamian, John Raymond, R. Chris Smith, & Patrick Hartigan*. 547, 995 (2001)
- Two New Ejecta-dominated Galactic Supernova Remnants: G337.2-0.7 and G309.2-0.6. *Cara E. Rakowski, John P. Hughes, & Patrick Slane*. 548, 258 (2001)
- The Central X-Ray Point Source in Cassiopeia A. *Deepto Chakraborty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan*. 548, 800 (2001)
- RXJ 0852.0-0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2-1.2). *Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach*. 548, 814 (2001)
- Supernova Remnants in the Sedov Expansion Phase: Thermal X-Ray Emission. *Kazimierz J. Borkowski, William J. Lyerly, & Stephen P. Reynolds*. 548, 820 (2001)
- The X-Ray Sources at the Center of the Supernova Remnant RX J0852.0-4622. *S. Mereghetti*. 548, L213 (2001)
- KUIPER BELT**
- The Kuiper Belt and Olbers's Paradox. *Scott J. Kenyon & Rogier A. Windhorst*. 547, L69 (2001)
- Migration Timescale Thresholds for Resonant Capture in the Plutino Problem. *L. Friedland*. 547, L75 (2001)
- Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>. *Ignacio Ferrin, D. Rabinowitz, B. Schaefer, J. Snyder, N. Ellman, B. Vicente, A. Rengstorf, D. Depoy, S. Salim, P. Andrews, C. Bailyn, C. Baltay, C. Briceño, P. Coppi, M. Deng, W. Emmet, A. Oemler, C. Sabbey, J. Shin, S. Sofia, W. van Altena, K. Vivas, C. Abad, A. Bongiovanni, G. Bruzual, F. Della Prugna, D. Herrera, G. Magris, J. Mateu, R. Pacheco, Ge. Sanchez, Gu. Sanchez, H. Schenner, J. Stock, K. Vieira, F. Fuenmayor, J. Hernandez, O. Naranjo, P. Rosenzweig, C. Secco, G. Spavieri, M. Gebhard, K. Honeycutt, S. Mufson, J. Musser, S. Pravdo, E. Helin, & K. Lawrence*. 548, L243 (2001)
- LINE: FORMATION**
- Accretion Disk Models and Their X-Ray Reflection Signatures. I. Local Spectra. *Sergei Nayakshin & Timothy R. Kallman*. 546, 406 (2001)
- Observational Signatures of X-Ray-irradiated Accretion Disks. *C. Done & S. Nayakshin*. 546, 419 (2001)
- The Hanle Effect as a Diagnostic of Magnetic Fields in Stellar Envelopes. III. Including the Finite Star Depolarization Effect. *R. Ignace*. 547, 393 (2001)
- Tailored Analyses of the WN 8 Stars WR 40 and WR 16. *J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck*. 548, 932 (2001)
- Observation of the Unidentified Infrared Bands in the Laboratory: Anti-Stokes Stimulated Raman Spectroscopy of a Rydberg Matter Surface Boundary Layer. *Leif Holmlid*. 548, L249 (2001)
- LINE: IDENTIFICATION**
- The Cyclic  $C_5H$  Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus*. 547, L65 (2001)
- Tailored Analyses of the WN 8 Stars WR 40 and WR 16. *J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck*. 548, 932 (2001)
- The Chandra Iron L X-Ray Line Spectrum of Capella. *Ehud Behar, Jean Cottam, & Steven M. Kahn*. 548, 966 (2001)
- Observation of the Unidentified Infrared Bands in the Laboratory: Anti-Stokes Stimulated Raman Spectroscopy of a Rydberg Matter Surface Boundary Layer. *Leif Holmlid*. 548, L249 (2001)
- LINE: PROFILES**
- Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748-288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin*. 546, 1055 (2001)
- Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. *Magnus Gustafsson & Lothar Frommhold*. 546, 1168 (2001)



- Infrared Space Observatory's Discovery of C<sub>4</sub>H<sub>2</sub>, C<sub>6</sub>H<sub>2</sub>, and Benzene in CRL 618.* José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters. 546, L123 (2001)
- Methylpolyynes and Small Hydrocarbons in CRL 618.* José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters. 546, L127 (2001)
- Estimation of Relativistic Accretion Disk Parameters from Iron Line Emission.* V. I. Pariev, B. C. Bromley, & W. A. Miller. 547, 649 (2001)
- Quiet-Sun Variability in a Temperature Minimum Region.* Y. X. Zhang, C. Fang, M. D. Ding, & W. C. Livingston. 547, L179 (2001)
- Chandra Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis.* Wayne L. Waldron & Joseph P. Cassinelli. 548, L45 (2001)
- Simulations of Accretion Flows Crossing the Last Stable Orbit.* Philip J. Armitage, Christopher S. Reynolds, & James Chiang. 548, 868 (2001)
- MAGNETIC FIELDS**
- X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A).* M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda. 546, L19 (2001)
- The Modified Weighted Slab Technique: Models and Results.* Frank C. Jones, Andrew Lukasiak, Vladimir Ptuskin, & William Webber. 547, 264 (2001)
- The Magnetorotational Instability across the Dead Zone of Protoplanetary Disks.* M. Reyes-Ruiz. 547, 465 (2001)
- The Role of Nonlinear Alfvén Waves in Shear Formation during Solar Magnetic Flux Emergence.* Ward Manchester IV. 547, 503 (2001)
- Photon Splitting and Pair Creation in Highly Magnetized Pulsars.* Matthew G. Baring & Alice K. Harding. 547, 929 (2001)
- Magnetic Field-Line Wandering and Shock Front Acceleration: Application to the Radio Emission of SN 1987A.* B. R. Ragot. 547, 1010 (2001)
- A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields.* T. E. Clarke, P. P. Kronberg, & Hans Bohringer. 547, L111 (2001)
- Random Scattering and Anisotropic Turbulence of Shear-Alfvén Wave Packets.* A. Bhattacharjee & C. S. Ng. 548, 318 (2001)
- Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi.* Pablo Rodríguez-Gil, Jorge Casares, Ignacio G. Martínez-Pais, Pasi Hakala, & Danny Steeghs. 548, L49 (2001)
- Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey.* Joshua C. Kempner & Craig L. Sarazin. 548, 639 (2001)
- MAGNETOHYDRODYNAMICS: MHD**
- Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae.* Eric G. Blackman, Adam Frank, & Carl Welch. 546, 288 (2001)
- Nonlinear Growth of the Three-dimensional Undular Instability of a Horizontal Magnetic Layer and the Formation of Arching Flux Tubes.* Y. Fan. 546, 509 (2001)
- Including the Transition Region in Models of the Large-Scale Solar Corona.* Roberto Lionello, Jon A. Linker, & Zoran Mikić. 546, 542 (2001)
- Clear Evidence of Reconnection Inflow of a Solar Flare.* T. Yokoyama, K. Akita, T. Morimoto, K. Inoue, & J. Newmark. 546, L69 (2001)
- Magnetic Reconnection Induced by Convective Intensification of Solar Photospheric Magnetic Fields.* Akitsugu Takeuchi & Kazunari Shibata. 546, L73 (2001)
- Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models.* Eve C. Ostriker, James M. Stone, & Charles F. Gammie. 546, 980 (2001)
- The Effects of Rotation on the Evolution of Rising Omega Loops in a Stratified Model Convection Zone.* W. P. Abnett, G. H. Fisher, & Y. Fan. 546, 1194 (2001)
- On the Timescale for the Formation of Protostellar Cores in Magnetic Interstellar Clouds.* Glenn E. Ciolek & Shantanu Basu. 547, 272 (2001)
- Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence.* Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen. 547, 280 (2001)
- Reconnection in a Striped Pulsar Wind.* Y. Lyubarsky & J. G. Kirk. 547, 437 (2001)
- The Magnetorotational Instability across the Dead Zone of Protoplanetary Disks.* M. Reyes-Ruiz. 547, 465 (2001)
- The Role of Nonlinear Alfvén Waves in Shear Formation during Solar Magnetic Flux Emergence.* Ward Manchester IV. 547, 503 (2001)
- Plasmoid Formation and Acceleration in the Solar Streamer Belt.* Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli. 547, 1167 (2001)
- Instabilities in a Nonuniform Partially Ionized Isothermal Magnetoplasma.* A. A. Mamun & P. K. Shukla. 548, 269 (2001)
- Random Scattering and Anisotropic Turbulence of Shear-Alfvén Wave Packets.* A. Bhattacharjee & C. S. Ng. 548, 318 (2001)
- Global MHD Simulation of the Inner Accretion Disk in a Pseudo-Newtonian Potential.* John F. Hawley & Julian H. Krolik. 548, 348 (2001)
- Magnetoinertial Oscillations of Jupiter's Inner Radiation Belt.* Yu-Qing Lou. 548, 460 (2001)
- Note on an Exact Solution for Magnetoatmospheric Waves.* P. S. Cally. 548, 473 (2001)
- Wave-driven Turbulent Coronal Heating in Open Field Line Regions: Nonlinear Phenomenological Model.* P. Dmitruk, L. J. Milano, & W. H. Matthaeus. 548, 482 (2001)
- Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events.* Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson. 548, 492 (2001)
- The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation.* D. L. Meier. 548, L9 (2001)
- The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube.* Geoffrey V. Bicknell & Jianke Li. 548, L69 (2001)
- Simulations of Accretion Flows Crossing the Last Stable Orbit.* Philip J. Armitage, Christopher S. Reynolds, & James Chiang. 548, 868 (2001)
- Exact Solutions for Two-dimensional Steady Magnetic Reconnection in Partially Ionized Plasmas.* H. S. Ji, M. T. Song, & G. L. Huang. 548, 1087 (2001)
- Magnetic Diffusion in Stratified Atmospheres.* E. E. DeLuca & N. E. Hurlburt. 548, 1093 (2001)
- Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs.* Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath. 548, L193 (2001)
- MASERS**
- A Shock-excited OH Maser in a Post-Asymptotic Giant Branch Envelope?* Maartje N. Sevenster & Jessica M. Chapman. 546, L119 (2001)
- Polarization and Extent of Maser Emission from Late-Type Stars: Support for a Plasma Turbulence Model of Maser Production.* Stacy Palen. 547, L57 (2001)
- Supersonic Water Masers in 30 Doradus.* Jacco Th. van Loon & Albert A. Zijlstra. 547, L61 (2001)
- The Approaching Death of the OH/IR Star IRAS 18455+0448.* B. M. Lewis, B. D. Oppenheimer, & I. J. Daubar. 548, L77 (2001)
- METEORS, METEOROIDS**
- The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites.* Frank H. Shu, Hsien Shang, Matthieu Gounelle, Alfred E. Glassgold, & Typhoon Lee. 548, 1029 (2001)
- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements.* Matthieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee. 548, 1051 (2001)
- METHODS: ANALYTICAL**
- Exact Expressions for the Critical Mach Numbers in the Two-Fluid Model of Cosmic-Ray-modified Shocks.* Peter A. Becker & Demosthenes Kazanas. 546, 429 (2001)
- The Formal Underpinnings of the Response Functions Used in X-Ray Spectral Analysis.* John P. Davis. 548, 1010 (2001)
- METHODS: DATA ANALYSIS**
- The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies.* Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz. 546, 805 (2001)
- The  $M_{\bullet}$ - $\sigma$  Relation for Supermassive Black Holes.* David Merritt & Laura Ferrarese. 547, 140 (2001)
- The Luminosity Function of Magnitude and Proper-Motion-selected Samples: The Case of White Dwarfs.* René A. Méndez & María Teresa Ruiz. 547, 252 (2001)
- The Extreme-Ultraviolet Excess Emission of the Virgo and A1795 Clusters: Reobservation with In Situ Background Measurements.* Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz. 547, L7 (2001)
- The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies.* Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes. 548, 97 (2001)
- Ensembles of Classifiers for Morphological Galaxy Classification.* D. Bazell & David W. Aha. 548, 219 (2001)

- Analysis of Energy Spectra with Low Photon Counts via Bayesian Posterior Simulation. *David A. van Dyk, Alanna Connors, Vinay L. Kashyap, & Aneta Siemiginowska.* 548, 224 (2001)
- Evidence for Rapid Iron K $\alpha$  Line Flux Variability in MGC -6-30-15. *Simon Vaughan & Rick Edelson.* 548, 694 (2001)
- On the Hardness-Intensity Correlation in Gamma-Ray Burst Pulses. *Luis Borgonovo & Felix Ryde.* 548, 770 (2001)
- The SIGMA/Granat Telescope: Calibration and Data Reduction. *L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul.* 548, 990 (2001)
- The Formal Underpinnings of the Response Functions Used in X-Ray Spectral Analysis. *John P. Davis.* 548, 1010 (2001)
- Deriving the Electron Density of the Solar Corona from the Inversion of Total Brightness Measurements. *A. P. Hayes, A. Vourlidis, & R. A. Howard.* 548, 1081 (2001)
- METHODS: LABORATORY**
- A Measurement of the Rotational Spectrum of the CH Radical in the Far-Infrared. *Steven A. Davidson, Kenneth M. Evenson, & John M. Brown.* 546, 330 (2001)
- The Abundances of Solid N<sub>2</sub> and Gaseous CO<sub>2</sub> in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira.* 548, 836 (2001)
- The Formation of C<sub>5</sub>H<sub>3</sub> Isomers as Potential Key Intermediates to Polycyclic Aromatic Hydrocarbon-like Molecules. *R. I. Kaiser, H. Y. Lee, A. M. Mebel, & Y. T. Lee.* 548, 852 (2001)
- Vibrational Spectra of Hydrogenated Buckminsterfullerene: A Candidate for the Unidentified Infrared Emission. *C. R. Stoldt, R. Maboudian, & C. Carraro.* 548, L225 (2001)
- METHODS: N-BODY SIMULATIONS**
- Merging History as a Function of Halo Environment. *Stefan Gottlöber, Anatoly Klypin, & Andrey V. Kravtsov.* 546, 223 (2001)
- How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut.* 546, L101 (2001)
- Halo Properties in Cosmological Simulations of Self-interacting Cold Dark Matter. *Romeel Davé, David N. Spergel, Paul J. Steinhardt, & Benjamin D. Wandelt.* 547, 574 (2001)
- Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. *Lucio Mayer, Fabio Governato, Monica Colpi, Ben Moore, Thomas Quinn, James Wadsley, Joachim Stadel, & George Lake.* 547, L123 (2001)
- First Structure Formation: A Simulation of Small-Scale Structure at High Redshift. *Hannah Jang-Condell & Lars Hernquist.* 548, 68 (2001)
- METHODS: NUMERICAL**
- On the Effect of Chaotic Orbits on Dynamical Friction. *Sofia A. Cora, M. Marcela Vergne, & Juan C. Muzzio.* 546, 165 (2001)
- Solar Oscillations and Convection. I. Formalism for Radial Oscillations. *Å. Nordlund & R. F. Stein.* 546, 576 (2001)
- Solar Oscillations and Convection. II. Excitation of Radial Oscillations. *R. F. Stein & Å. Nordlund.* 546, 585 (2001)
- Monte Carlo Simulations of Type Ia Supernova Observations in Supernova Surveys. *Weidong Li, Alexei V. Filippenko, & Adam G. Riess.* 546, 719 (2001)
- Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models. *Eve C. Ostriker, James M. Stone, & Charles F. Gammie.* 546, 980 (2001)
- The Effects of Rotation on the Evolution of Rising Omega Loops in a Stratified Model Convection Zone. *W. P. Abbott, G. H. Fisher, & Y. Fan.* 546, 1194 (2001)
- Numerical Models of the Multiphase Interstellar Matter with Stellar Energy Feedback on a Galactic Scale. *Keiichi Wada & Colin A. Norman.* 547, 172 (2001)
- Analysis of Resonances in Grand Design Spiral Galaxies. *Nelson Vera-Villamizar, Horacio Dottori, Ivanio Puerari, & Reinaldo de Carvalho.* 547, 187 (2001)
- The Luminosity Function of Magnitude and Proper-Motion-selected Samples: The Case of White Dwarfs. *René A. Méndez & María Teresa Ruiz.* 547, 252 (2001)
- Ensembles of Classifiers for Morphological Galaxy Classification. *D. Bazell & David W. Aha.* 548, 219 (2001)
- Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren.* 548, 323 (2001)
- Simulations of Pregalactic Structure Formation with Radiative Feedback. *Marie E. Machacek, Greg L. Bryan, & Tom Abel.* 548, 509 (2001)
- METHODS: OBSERVATIONAL**
- A Search for Jovian Planets around Hot White Dwarfs. *You-Hua Chu, Bryan C. Dunne, & Robert A. Gruendl.* 546, L61 (2001)
- METHODS: STATISTICAL**
- Correlations in the Spatial Power Spectra Inferred from Angular Clustering: Methods and Application to the Automated Plate Measuring Survey. *Daniel J. Eisenstein & Matias Zaldarriaga.* 546, 2 (2001)
- Do Clusters Contain a Large Population of Dwarf Galaxies? *Carlos A. Valotto, Ben Moore, & Diego G. Lambas.* 546, 157 (2001)
- The Bispectrum of IRAS Redshift Catalogs. *Roman Scoccimarro, Hume A. Feldman, J. N. Fry, & Joshua A. Frieman.* 546, 652 (2001)
- A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu.* 546, 734 (2001)
- The Multiphase Nature of the Intracluster Medium of Some Clusters of Galaxies. *Massimiliano Bonamente, Richard Lieu, & Jonathan P. D. Mittaz.* 546, 805 (2001)
- Analysis of Energy Spectra with Low Photon Counts via Bayesian Posterior Simulation. *David A. van Dyk, Alanna Connors, Vinay L. Kashyap, & Aneta Siemiginowska.* 548, 224 (2001)
- Effects of Luminosity Functions Induced by Relativistic Beaming on the Statistics of Cosmological Gamma-Ray Bursts. *Chunglee Kim, Heon-Young Chang, & Insu Yi.* 548, 532 (2001)
- Statistical Power, the Bispectrum, and the Search for Non-Gaussianity in the Cosmic Microwave Background Anisotropy. *Nicholas G. Phillips & A. Kogut.* 548, 540 (2001)
- Fast Cosmic Microwave Background Analyses via Correlation Functions. *István Szapudi, Simon Prunet, Dmitry Pogosyan, Alexander S. Szalay, & J. Richard Bond.* 548, L115 (2001)
- MOLECULAR DATA**
- A Measurement of the Rotational Spectrum of the CH Radical in the Far-Infrared. *Steven A. Davidson, Kenneth M. Evenson, & John M. Brown.* 546, 330 (2001)
- The Cyclic C<sub>5</sub>H Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus.* 547, L65 (2001)
- The Abundances of Solid N<sub>2</sub> and Gaseous CO<sub>2</sub> in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira.* 548, 836 (2001)
- MOLECULAR PROCESSES**
- Chemical Differentiation in Regions of Massive Star Formation. *S. D. Rodgers & S. B. Charnley.* 546, 324 (2001)
- Primordial Star Formation under Far-Ultraviolet Radiation. *Kazuyuki Omukai.* 546, 635 (2001)
- The Cyclic C<sub>5</sub>H Radical. *A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus.* 547, L65 (2001)
- Observations of DNC and HN<sup>13</sup>C in Dark Cloud Cores. *Tomoya Hirota, Masafumi Ikeda, & Satoshi Yamamoto.* 547, 814 (2001)
- The Formation of C<sub>5</sub>H<sub>3</sub> Isomers as Potential Key Intermediates to Polycyclic Aromatic Hydrocarbon-like Molecules. *R. I. Kaiser, H. Y. Lee, A. M. Mebel, & Y. T. Lee.* 548, 852 (2001)
- Observation of the Unidentified Infrared Bands in the Laboratory: Anti-Stokes Stimulated Raman Spectroscopy of a Rydberg Matter Surface Boundary Layer. *Leif Holmlid.* 548, L249 (2001)
- Laboratory Measurements of Molecular Hydrogen Formation on Amorphous Water Ice. *G. Manico, G. Raguni, V. Pirronello, J. E. Roser, & G. Vidali.* 548, L253 (2001)
- NEUTRINOS**
- Relic Neutrinos and Z-Resonance Mechanism for Highest Energy Cosmic Rays. *James L. Crooks, James O. Dunn, & Paul H. Frampton.* 546, L1 (2001)
- NUCLEAR REACTIONS, NUCLEOSYNTHESIS, ABUNDANCES**
- Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis.* 546, 248 (2001)
- Magnetic Field Effect on Masses of Atomic Nuclei. *V. N. Kondratyev, Toshihi Maruyama, & Satoshi Chiba.* 546, 1137 (2001)

Production of  $^2\text{H}$ ,  $^3\text{He}$ , and  $^7\text{Li}$  from Interactions between Jets and Clouds.  
M. Famiano, J. Vandegriff, R. N. Boyd, T. Kajino, & P. Osmer. 547, L21 (2001)

# PLANETS AND SATELLITES: INDIVIDUAL

## Jupiter

Magnetoinertial Oscillations of Jupiter's Inner Radiation Belt. Yu-Qing Lou. 548, 460 (2001)

## Neptune

Migration Timescale Thresholds for Resonant Capture in the Plutino Problem.  
L. Friedland. 547, L75 (2001)

# PLASMAS

Clear Evidence of Reconnection Inflow of a Solar Flare. T. Yokoyama, K. Akita, T. Morimoto, K. Inoue, & J. Newmark. 546, L69 (2001)

Reconnection in a Striped Pulsar Wind. Y. Lyubarsky & J. G. Kirk. 547, 437 (2001)

Instabilities in a Nonuniform Partially Ionized Isothermal Magnetoplasma.  
A. A. Mamun & P. K. Shukla. 548, 269 (2001)

Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath. 548, L193 (2001)

# POLARIZATION

The Radio Structure of the Supernova Remnant G315.4–2.3 (MSH 14–63).  
John R. Dickel, Richard G. Strom, & D. K. Milne. 546, 447 (2001)

Measurement of the Magnetic Field Direction in the NGC 2024 FIR 5 Protostellar Outflow. J. S. Greaves, W. S. Holland, & D. Ward-Thompson. 546, L53 (2001)

The Hanle Effect as a Diagnostic of Magnetic Fields in Stellar Envelopes. III. Including the Finite Star Depolarization Effect. R. Ignace. 547, 393 (2001)

Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad. 547, 667 (2001)

Interstellar Extinction and Polarization in the Taurus Dark Clouds: The Optical Properties of Dust near the Diffuse/Dense Interface. D. C. B. Whittet, P. A. Gerakines, J. H. Hough, & S. S. Shenoy. 547, 872 (2001)

A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields. T. E. Clarke, P. P. Kronberg, & Hans Bohringer. 547, L111 (2001)

Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi. Pablo Rodriguez-Gil, Jorge Casares, Ignacio G. Martinez-Pais, Pasi Hakala, & Danny Steeghs. 548, L49 (2001)

A Limit on the Polarized Anisotropy of the Cosmic Microwave Background at Subdegree Angular Scales. M. M. Hedman, D. Barkats, J. O. Gundersen, S. T. Staggs, & B. Winstein. 548, L111 (2001)

# RADIATION MECHANISMS: GENERAL

Photon Splitting and Pair Creation in Highly Magnetized Pulsars. Matthew G. Baring & Alice K. Harding. 547, 929 (2001)

# RADIATION MECHANISMS: NONTHERMAL

Synchrotron Model for the Infrared, Optical, and X-Ray Emission of the Crab Pulsar. André R. Crusius-Wätzell, Thomas Kunzl, & Harald Lesch. 546, 401 (2001)

Accretion Disk Models and Their X-Ray Reflection Signatures. I. Local Spectra. Sergei Nayakshin & Timothy R. Kallman. 546, 406 (2001)

Observational Signatures of X-Ray-irradiated Accretion Disks. C. Done & S. Nayakshin. 546, 419 (2001)

The Radio Structure of the Supernova Remnant G315.4–2.3 (MSH 14–63).  
John R. Dickel, Richard G. Strom, & D. K. Milne. 546, 447 (2001)

X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda. 546, L19 (2001)

Prompt High-Energy Gamma-Ray Emission from Synchrotron Self-Compton Process in the Reverse Shocks of Gamma-Ray Bursts. X. Y. Wang, Z. G. Dai, & T. Lu. 546, L33 (2001)

Broadband Spectral Energy Distributions of Active Galactic Nuclei from an Accretion Disk with Advective Coronal Flow. Toshihiro Kawaguchi, Toshiya Shimura, & Shin Mineshige. 546, 966 (2001)

Accelerated Electrons in Cassiopeia A: An Explanation for the Hard X-Ray Tail. J. Martin Laming. 546, 1149 (2001)

Charge Densities above Pulsar Polar Caps. Axel Jessner, Harald Lesch, & Thomas Kunzl. 547, 959 (2001)

Search for Short Variability Timescale of the GeV Gamma-Ray-loud Blazars.  
G. Z. Xie, K. H. Li, J. M. Bai, B. Z. Dai, W. W. Liu, X. Zhang, & S. Y. Xing. 548, 200 (2001)

New Evidence for the Unified Scheme of BL Lacertae Objects and FR I Radio Galaxies. J. M. Bai & Myung Gyoan Kim. 548, 244 (2001)

Magnetoinertial Oscillations of Jupiter's Inner Radiation Belt. Yu-Qing Lou. 548, 460 (2001)

Off-Beam Gamma-Ray Pulsars and Unidentified Egret Sources in the Gould Belt. Alice K. Harding & Bing Zhang. 548, L37 (2001)

On the Synchrotron Self-Compton Emission from Relativistic Shocks and Its Implications for Gamma-Ray Burst Afterglows. Re'em Sari & Ann A. Esin. 548, 787 (2001)

RIX 0852.0–0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2–1.2). Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach. 548, 814 (2001)

# RADIATION MECHANISMS: THERMAL

Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. S. J. Tingay & D. W. Murphy. 546, 210 (2001)

Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. Magnus Gustafsson & Lothar Frommhold. 546, 1168 (2001)

X-Ray Images of Hot Accretion Flows. Feryal Özel & Tiziana Di Matteo. 548, 213 (2001)

# RADIATIVE TRANSFER

Accretion Disk Models and Their X-Ray Reflection Signatures. I. Local Spectra. Sergei Nayakshin & Timothy R. Kallman. 546, 406 (2001)

Observational Signatures of X-Ray-irradiated Accretion Disks. C. Done & S. Nayakshin. 546, 419 (2001)

The Origin of Mn II Emission in the Spectra of Chemically Peculiar Stars. T. A. A. Sigut. 546, L115 (2001)

SN 1984A and Delayed-Detonation Models of Type Ia Supernovae. Eric J. Lentz, E. Baron, David Branch, & Peter H. Hauschildt. 547, 402 (2001)

Analysis of the Type IIa SN 1998S: Effects of Circumstellar Interaction on Observed Spectra. Eric J. Lentz, E. Baron, Peter Lundqvist, David Branch, Peter H. Hauschildt, Claes Fransson, Peter Garnavich, Nate Bastian, Alexei V. Filippenko, R. P. Kirshner, P. M. Challis, S. Jha, Bruno Leibundgut, R. McCray, E. Michael, Nino Panagia, M. M. Phillips, C. S. J. Pun, Brian Schmidt, George Sonneborn, N. B. Suntzeff, L. Wang, & J. C. Wheeler. 547, 406 (2001)

Lagrangian and Eulerian Stratifications of Acoustic Oscillations through the Solar Photosphere. Inés Rodríguez Hidalgo, Basilio Ruiz Cobo, Manuel Collados, & Luis R. Bellot Rubio. 547, 491 (2001)

Balmer-dominated Spectra of Nonradiative Shocks in the Cygnus Loop, RCW 86, and Tycho Supernova Remnants. Parviz Ghavamian, John Raymond, R. Chris Smith, & Patrick Hartigan. 547, 995 (2001)

Model Atmospheres with Individualized Abundances. N. Piskunov & F. Kupka. 547, 1040 (2001)

Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with Infrared Space Observatory LWS Observations. E. I. Chiang, M. K. Jung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck. 547, 1077 (2001)

Modeling the Interstellar Medium of Low Surface Brightness Galaxies: Constraining Internal Extinction, Disk Color Gradients, and Intrinsic Rotation Curve Shapes. L. D. Matthews & Kenneth Wood. 548, 150 (2001)

Infall Models of Class 0 Protostars. Ray Jayawardhana, Lee Hartmann, & Nuria Calvet. 548, 310 (2001)

# RADIO CONTINUUM: GALAXIES

Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. S. J. Tingay & D. W. Murphy. 546, 210 (2001)

X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda. 546, L19 (2001)

An Efficient Search for Gravitationally Lensed Radio Lobes. J. Lehar, A. Buchalter, R. G. McMahon, C. S. Kochanek, & T. W. B. Muxlow. 547, 60 (2001)

Radio Variability of Sagittarius A\*—A 106 Day Cycle. Jun-Hui Zhao, G. C. Bower, & W. M. Goss. 547, L29 (2001)

Quasar Absorption Lines as a Function of Quasar Orientation Measures. Gordon T. Richards, S. A. Laurent-Muehleisen, Robert H. Becker, & Donald G. York. 547, 635 (2001)



- VLBI Space Observatory Programme Observation of the Quasar PKS 2215+020: A New Laboratory for Core-Jet Physics at  $z = 3.572$ . A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi, N. Kawaguchi, & I. I. K. Pauliny-Toth. 547, 714 (2001)
- Limits on the Accretion Rates onto Massive Black Holes in Nearby Galaxies. T. Di Matteo, C. L. Carilli, & A. C. Fabian. 547, 731 (2001)
- A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields. T. E. Clarke, P. P. Kronberg, & Hans Bohringer. 547, L111 (2001)
- New Evidence for the Unified Scheme of BL Lacertae Objects and FR I Radio Galaxies. J. M. Bai & Myung Gyoong Kim. 548, 244 (2001)
- The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation. D. L. Meier. 548, L9 (2001)
- Submillimeter Imaging of a Protocluster Region at  $z = 3.09$ . Scott C. Chapman. 548, L17 (2001)
- Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey. Joshua C. Kempner & Craig L. Sarazin. 548, 639 (2001)
- The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger. 548, L147 (2001)
- RADIO CONTINUUM: GENERAL**
- Radio-quiet Quasars in the Direction of the Northern Hubble Deep Field. Chris Impey & Cathy Petry. 547, 117 (2001)
- RADIO CONTINUUM: ISM**
- The Radio Structure of the Supernova Remnant G315.4–2.3 (MSH 14–63). John R. Dickel, Richard G. Strom, & D. K. Milne. 546, 447 (2001)
- The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube. Geoffrey V. Bicknell & Jianke Li. 548, L69 (2001)
- RADIO CONTINUUM: STARS**
- Single-Pulse Characteristics of the Millisecond Radio Pulsar PSR B1937+21 at 430 MHz. F. A. Jenet, S. B. Anderson, & T. A. Prince. 546, 394 (2001)
- A Binary Millisecond Pulsar in Globular Cluster NGC 6544. Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne. 546, L25 (2001)
- RADIO LINES: GALAXIES**
- The H I Content of Spirals. II. Gas Deficiency in Cluster Galaxies. Jose M. Solanes, Alberto Manrique, Carlos García-Gómez, Guillermo González-Casado, Riccardo Giovanelli, & Martha P. Haynes. 548, 97 (2001)
- RADIO LINES: GENERAL**
- A Radio Telescope Search for Axions. B. D. Blout, E. J. Daw, M. P. Decowski, P. T. P. Ho, L. J. Rosenberg, & D. B. Yu. 546, 825 (2001)
- A VLA Search for the Ohio State "Wow." Robert H. Gray & Kevin B. Marvel. 546, 1171 (2001)
- RADIO LINES: ISM**
- The Extreme Scattering Event toward 1741–038: H I Absorption. T. Joseph W. Lazio, R. A. Gaume, M. J. Claussen, A. L. Fey, R. L. Fiedler, & K. J. Johnston. 546, 267 (2001)
- The Cyclic C<sub>5</sub>H Radical. A. J. Apponi, M. E. Sanz, C. A. Gottlieb, M. C. McCarthy, & P. Thaddeus. 547, L65 (2001)
- The Milky Way in Molecular Clouds: A New Complete CO Survey. T. M. Dame, Dap Hartmann, & P. Thaddeus. 547, 792 (2001)
- The Effects of Noise and Sampling on the Spectral Correlation Function. Paolo Padoan, Erik W. Rosolowsky, & Alyssa A. Goodman. 547, 862 (2001)
- Ultra-High-Density Molecular Core and Warped Nuclear Disk in the Deep Potential of Radio Lobe Galaxy NGC 3079. Y. Sofue, J. Koda, K. Kohno, S. K. Okumura, M. Honma, A. Kawamura, & Judith A. Irwin. 547, L115 (2001)
- Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe. 548, 278 (2001)
- Large-Scale Grain Mantle Disruption in the Galactic Center. Jesus Martin-Pintado, J. R. Rizzo, P. de Vicente, N. J. Rodriguez-Fernandez, & A. Fuente. 548, L65 (2001)
- RADIO LINES: STARS**
- The Approaching Death of the OH/IR Star IRAS 18455+0448. B. M. Lewis, B. D. Oppenheimer, & I. J. Daubar. 548, L77 (2001)
- RELATIVITY**
- Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748–288. J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin. 546, 1055 (2001)
- Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb. 546, 1098 (2001)
- Relativistic Diskoseismology. II. Analytical Results for c-Modes. Alexander S. Silbergleit, Robert V. Wagoner, & Manuel Ortega-Rodríguez. 548, 335 (2001)
- The Association of Jet Production with Geometrically Thick Accretion Flows and Black Hole Rotation. D. L. Meier. 548, L9 (2001)
- Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro. 548, 919 (2001)
- SCATTERING**
- Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. Magnus Gustafsson & Lothar Frommhold. 546, 1168 (2001)
- Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad. 547, 667 (2001)
- Low-Frequency Radio Observations of the Angular Broadening of the Crab Nebula Due to a Coronal Mass Ejection. R. Ramesh, C. Kathiravan, & Ch. V. Sastry. 548, L229 (2001)
- SHOCK WAVES**
- Exact Expressions for the Critical Mach Numbers in the Two-Fluid Model of Cosmic-Ray-modified Shocks. Peter A. Becker & Demosthenes Kazanas. 546, 429 (2001)
- Accelerated Electrons in Cassiopeia A: An Explanation for the Hard X-Ray Tail. J. Martin Laming. 546, 1149 (2001)
- A Shock-excited OH Maser in a Post-Asymptotic Giant Branch Envelope? Maartje N. Sevenster & Jessica M. Chapman. 546, L119 (2001)
- Dynamical Effects of Global Thermal Instability in Shock-compressed Gas Slabs. M. Yamada & R. Nishi. 547, 99 (2001)
- The Modified Weighted Slab Technique: Models and Results. Frank C. Jones, Andrew Lukasiak, Vladimir Ptuskin, & William Webber. 547, 264 (2001)
- SiO Emission in the Multilobe Outflow Associated with IRAS 16293–2422. Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi. 547, 899 (2001)
- Balmer-dominated Spectra of Nonradiative Shocks in the Cygnus Loop, RCW 86, and Tycho Supernova Remnants. Parviz Ghavamian, John Raymond, R. Chris Smith, & Patrick Hartigan. 547, 995 (2001)
- Magnetic Field-Line Wandering and Shock Front Acceleration: Application to the Radio Emission of SN 1987A. B. R. Ragot. 547, 1010 (2001)
- Heavy Ion Abundances and Spectra and the Large Gradual Solar Energetic Particle Event of 2000 July 14. D. V. Reames, C. K. Ng, & A. J. Tylka. 548, L233 (2001)
- SOLAR SYSTEM: FORMATION**
- Size-selective Concentration of Chondrules and Other Small Particles in Protoplanetary Nebula Turbulence. Jeffrey N. Cuzzi, Robert C. Hogan, Julie M. Paque, & Anthony R. Dobrovolskis. 546, 496 (2001)
- A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory. M. J. Mumma, I. S. McLean, M. A. DiSantill, J. E. Larkin, N. Dello Russo, K. Magee-Sauer, E. E. Becklin, T. Bida, F. Chaffee, A. R. Conrad, D. F. Figer, A. M. Gilbert, J. R. Graham, N. A. Levenson, R. E. Novak, D. C. Reuter, H. I. Teplitz, M. K. Wilcox, & Li-Hong Xu. 546, 1183 (2001)
- The Magnetorotational Instability across the Dead Zone of Protoplanetary Disks. M. Reyes-Ruiz. 547, 465 (2001)
- The Kuiper Belt and Olbers's Paradox. Scott J. Kenyon & Rogier A. Windhorst. 547, L69 (2001)
- Migration Timescale Thresholds for Resonant Capture in the Pluto Problem. L. Friedland. 547, L75 (2001)
- On the Tidal Inflation of Short-Period Extrasolar Planets. Peter Bodenheimer, D. N. C. Lin, & R. A. Mardling. 548, 466 (2001)
- The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. Frank H. Shu, Hsien Shang, Matthieu Gounelle, Alfred E. Glassgold, & Typhoon Lee. 548, 1029 (2001)
- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. Matthieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee. 548, 1051 (2001)
- SPACE VEHICLES: INSTRUMENTS**
- The SIGMA/Granat Telescope: Calibration and Data Reduction. L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul. 548, 990 (2001)

**STARS: ABUNDANCES**

- Star Counts across the Red Giant Branch and Below. *G. Bono, S. Cassisi, M. Zoccali, & G. Piotto*. 546, L109 (2001)
- Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? *Sean G. Ryan, Timothy C. Beers, Toshitaka Kajino, & Katarina Rosolankova*. 547, 231 (2001)
- Hot Horizontal-Branch Stars in the Galactic Bulge. *I. Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker*. 547, 240 (2001)
- The Coronal Metallicity of the Intermediate Activity Dwarf  $\xi$  Bootis A. *Jeremy J. Drake & Vinay Kashyap*. 547, 428 (2001)
- First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy. *K. A. Venn, D. J. Lennon, A. Kaufer, J. K. McCarthy, N. Przybilla, R. P. Kudritzki, M. Lemke, E. D. Skillman, & S. J. Smartt*. 547, 765 (2001)
- Boron Abundances in Early B Stars: Results from the B III Resonance Line in IUE Data. *Charles R. Proffitt & Mark F. Quigley*. 548, 429 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin*. 548, L81 (2001)
- Abundance Patterns in the Draco, Sextans, and Ursa Minor Dwarf Spheroidal Galaxies. *Matthew D. Shetrone, Patrick Côté, & W. L. W. Sargent*. 548, 592 (2001)

**STARS: ACTIVITY**

- The Coronal Metallicity of the Intermediate Activity Dwarf  $\xi$  Bootis A. *Jeremy J. Drake & Vinay Kashyap*. 547, 428 (2001)
- Simulations of the Photospheric Magnetic Activity and Outer Atmospheric Radiative Losses of Cool Stars Based on Characteristics of the Solar Magnetic Field. *Carolus J. Schrijver*. 547, 475 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin*. 548, L81 (2001)

**STARS: AGB AND POST-AGB**

- Presolar SiC Grains of Type Y: Origin from Low-Metallicity Asymptotic Giant Branch Stars. *Sachiko Amari, Larry R. Nittler, Ernst Zinner, Roberto Gallino, Maria Lugaro, & Roy S. Lewis*. 546, 248 (2001)
- Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn*. 546, 279 (2001)
- Magnetohydrodynamic Stellar and Disk Winds: Application to Planetary Nebulae. *Eric G. Blackman, Adam Frank, & Carl Welch*. 546, 288 (2001)
- A Shock-excited OH Maser in a Post-Asymptotic Giant Branch Envelope? *Maartje N. Sevenster & Jessica M. Chapman*. 546, L119 (2001)
- Modeling CO Emission from Mira's Wind. *N. Ryde & F. L. Schöier*. 547, 384 (2001)
- Polarization and Extent of Maser Emission from Late-Type Stars: Support for a Plasma Turbulence Model of Maser Production. *Stacy Palen*. 547, L57 (2001)
- Photoevaporating Flows from the Cometary Knots in the Helix Nebula (NGC 7293). *L. López-Martin, A. C. Raga, G. Mellema, W. J. Henney, & J. Canto*. 548, 288 (2001)
- The Approaching Death of the OH/IR Star IRAS 18455+0448. *B. M. Lewis, B. D. Oppenheimer, & I. J. Daubar*. 548, L77 (2001)

**STARS: ATMOSPHERES**

- Infrared Absorption Spectra of Collisionally Interacting He and H Atoms. *Magnus Gustafsson & Lothar Frommhold*. 546, 1168 (2001)
- First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy. *K. A. Venn, D. J. Lennon, A. Kaufer, J. K. McCarthy, N. Przybilla, R. P. Kudritzki, M. Lemke, E. D. Skillman, & S. J. Smartt*. 547, 765 (2001)
- Model Atmospheres with Individualized Abundances. *N. Piskunov & F. Kupka*. 547, 1040 (2001)
- Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschildt, S. Starrfield, & E. Baron*. 547, 1057 (2001)
- Tailored Analyses of the WN 8 Stars WR 40 and WR 16. *J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck*. 548, 932 (2001)
- Spatial/Spectral Resolution of a Galactic Bulge K3 Giant Stellar Atmosphere via Gravitational Microlensing. *Sandra Castro, Richard W. Pogge, R. Michael Rich, D. L. DePoy, & Andrew Gould*. 548, L197 (2001)

**STARS: BINARIES: CLOSE**

- Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub*. 546, 358 (2001)
- Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. *S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan*. 546, 1075 (2001)
- Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe*. 547, 345 (2001)
- Accretion Disk Boundary Layers around Neutron Stars: X-Ray Production in Low-Mass X-Ray Binaries. *Robert Popham & Rashid Sunyaev*. 547, 355 (2001)
- A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba*. 547, 412 (2001)
- Discovery of Two Relativistic Neutron Star-White Dwarf Binaries. *R. T. Edwards & M. Bailes*. 547, L37 (2001)
- The X-Ray Properties of Low-Frequency Quasi-periodic Oscillations from GRS 1915+105 up to 120 keV. *John A. Tomsick & Philip Kaaret*. 548, 401 (2001)
- Disk-Jet Connection in the Microquasar GRS 1915+105 and Infrared and Radio Emission. *J. S. Yadav*. 548, 876 (2001)
- Circumbinary Disks and Cataclysmic Variable Evolution. *H. C. Spruit & Ronald E. Taam*. 548, 900 (2001)
- Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo*. 548, L171 (2001)

**STARS: BINARIES: ECLIPSING**

- The Best Brown Dwarf Yet? A Companion to the Hyades Eclipsing Binary V471 Tauri. *Edward F. Guinan & Ignasi Ribas*. 546, L43 (2001)
- The X-Ray Photoionized Wind in Cen X-3/V779 Cen. *Patrick S. Wojdowski, Duane A. Liedahl, & Masao Sako*. 547, 973 (2001)
- Time-resolved Hubble Space Telescope Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman*. 548, 410 (2001)
- Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper*. 548, 889 (2001)
- Intrinsic and Reprocessed Optical Emission from the Companion to PSR J2051-0827. *B. W. Stappers, M. H. van Kerkwijk, J. F. Bell, & S. R. Kulkarni*. 548, L183 (2001)

**STARS: BINARIES: GENERAL**

- Broadband Spectrum of Cygnus X-1 in Two Spectral States with BeppoSAX. *F. Frontera, E. Palazzi, A. A. Zdziarski, F. Haardt, G. C. Perola, L. Chiappetti, G. Cusumano, D. Dal Fiume, S. Del Sordo, M. Orlandini, A. N. Parmar, L. Piro, A. Santangelo, A. Segreto, A. Treves, & M. Trifoglio*. 546, 1027 (2001)
- A Sensitive Search for Methane in the Infrared Spectrum of  $\tau$  Bootis. *Günter Wiedemann, Drake Deming, & Gordon Bjoraker*. 546, 1068 (2001)
- The Correlated Intensity and Spectral Evolution of Cygnus X-1 during State Transitions. *Lingling Wen, Wei Cui, & Hale V. Bradt*. 546, L105 (2001)
- The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre*. 547, 1034 (2001)
- Gravitational Microlensing of Gamma-Ray Burst Afterglows by Single and Binary Stars. *Shude Mao & Abraham Loeb*. 547, L97 (2001)
- High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Tails in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber*. 547, L147 (2001)
- Does the Mass Accretion Rate Depend on the Radius of the Accreting Star? *Abraham Loeb, Ramesh Narayan, & John C. Raymond*. 547, L151 (2001)
- Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7-2942. *Wei Cui, N. S. Schulz, F. K. Baganoff, M. W. Bautz, J. P. Dory, G. P. Garmire, I. F. Mirabel, G. R. Ricker, L. F. Rodríguez, & S. C. Taylor*. 548, 394 (2001)
- Discovery of Five Binary Radio Pulsars. *F. Camilo, A. G. Lyne, R. N. Manchester, J. F. Bell, I. H. Stairs, N. D'Amico, V. M. Kaspi, A. Possenti, F. Crawford, & N. P. F. McKay*. 548, L187 (2001)

**STARS: BINARIES: SPECTROSCOPIC**

Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? Sean G. Ryan, Timothy C. Beers, Toshitaka Kajino, & Katarina Rosolankova. 547, 231 (2001)

A Preliminary Visual Orbit of BY Draconis. A. F. Boden & B. F. Lane. 547, 1071 (2001)

Detection of the Faint Companion in the Massive Binary HD 199579. A. M. Williams, D. R. Gies, W. G. Bagnuolo, Jr., D. H. Berger, P. A. Erling, T. J. Fallon, J. A. Harvin, W. Huang, W. C. Jao, T. S. Josephs, J. P. McFarland, M. V. McSwain, R. L. Riddle, D. J. Wallace, D. W. Wingert, A. W. Fullerton, & C. T. Bolton. 548, 425 (2001)

Preliminary Astrometric Masses for Proposed Extrasolar Planetary Companions. Inwoo Han, David C. Black, & George Gatewood. 548, L57 (2001)

Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper. 548, 889 (2001)

**STARS: BINARIES: VISUAL**

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**STARS: BLUE STRAGGLERS**

Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? Sean G. Ryan, Timothy C. Beers, Toshitaka Kajino, & Katarina Rosolankova. 547, 231 (2001)

Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren. 548, 323 (2001)

**STARS: CHEMICALLY PECULIAR**

The Origin of Mn II Emission in the Spectra of Chemically Peculiar Stars. T. A. A. Sigut. 546, L115 (2001)

**STARS: CIRCUMSTELLAR MATTER**

Warm Dust Emission near W75 N IRS1: Evidence for Multiple Energetic Outflows. D. S. Shepherd. 546, 345 (2001)

Ages of A-Type Vega-like Stars from  $uvby\beta$  Photometry. Inseok Song, J.-P. Caillault, David Barrado y Navascués, & John R. Stauffer. 546, 352 (2001)

Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub. 546, 358 (2001)

NGC 1333—Protostars, Dust Shells, and Triggered Star Formation. Göran Sandell & Lewis B. G. Knee. 546, L49 (2001)

Infrared Space Observatory's Discovery of  $C_4H_2$ ,  $C_6H_2$ , and Benzene in CRL 618. José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters. 546, L123 (2001)

Methylpolynes and Small Hydrocarbons in CRL 618. José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters. 546, L127 (2001)

Modeling CO Emission from Mira's Wind. N. Ryde & F. L. Schöier. 547, 384 (2001)

Polarization and Extent of Maser Emission from Late-Type Stars: Support for a Plasma Turbulence Model of Maser Production. Stacy Palen. 547, L57 (2001)

An  $H^{13}CO^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada. 547, 840 (2001)

Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with Infrared Space Observatory LWS Observations. E. I. Chiang, M. K. Joung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck. 547, 1077 (2001)

The Approaching Death of the OH/IR Star IRAS 18455+0448. B. M. Lewis, B. D. Oppenheimer, & I. J. Daubar. 548, L77 (2001)

Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler. 548, 861 (2001)

Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman. 548, 1020 (2001)

Disk Locking and the Presence of Slow Rotators among Solar-Type Stars in Young Star Clusters. Sydney Barnes, Sabatino Sofia, & Marc Pinsonneault. 548, 1071 (2001)

Hubble Space Telescope Proper-Motion Measurements of the  $\eta$  Carinae Nebula. Jon A. Morse, James R. Kellogg, John Bally, Kris Davidson, Bruce Balick, & Dennis Ebbets. 548, L207 (2001)

**STARS: CORONAE**

The Coronal Metallicity of the Intermediate Activity Dwarf  $\xi$  Bootis A. Jeremy J. Drake & Vinay Kashyap. 547, 428 (2001)

Chandra Observations of the Open Cluster NGC 2516. F. R. Harnden, Jr., N. R. Adams, F. Damiani, J. J. Drake, N. R. Evans, F. Favata, E. Flaccomio, P. Freeman, R. D. Jeffries, V. Kashyap, G. Micela, B. M. Patten, N. Pizzolato, J. F. Schachter, S. Sciortino, J. Stauffer, S. J. Wolk, & M. V. Zombeck. 547, L141 (2001)

Enhanced Noble Gases in the Coronae of Active Stars. Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin. 548, L81 (2001)

**STARS: DISTANCES**

An Empirical Procedure to Estimate Distances to Stellar Clusters. Carlos Allende Prieto. 547, 200 (2001)

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Ages of A-Type Vega-like Stars from  $uvby\beta$  Photometry. Inseok Song, J.-P. Caillault, David Barrado y Navascués, & John R. Stauffer. 546, 352 (2001)

Physical Parameters of Erupting Luminous Blue Variables: NGC 2363—V1 Caught in the Act. Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier. 546, 484 (2001)

Detection of the Faint Companion in the Massive Binary HD 199579. A. M. Williams, D. R. Gies, W. G. Bagnuolo, Jr., D. H. Berger, P. A. Erling, T. J. Fallon, J. A. Harvin, W. Huang, W. C. Jao, T. S. Josephs, J. P. McFarland, M. V. McSwain, R. L. Riddle, D. J. Wallace, D. W. Wingert, A. W. Fullerton, & C. T. Bolton. 548, 425 (2001)

Boron Abundances in Early B Stars: Results from the B III Resonance Line in IUE Data. Charles R. Proffitt & Mark F. Quigley. 548, 429 (2001)

Chandra Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis. Wayne L. Waldron & Joseph P. Cassinelli. 548, L45 (2001)

Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper. 548, 889 (2001)

The Abundance Patterns of Sirius and Vega. H. M. Qui, G. Zhao, Y. Q. Chen, & Z. W. Li. 548, 953 (2001)

Stellar Spectroscopy Far beyond the Local Group. Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla. 548, L159 (2001)

**STARS: EMISSION-LINE, BE**

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A High Intrinsic Peculiarity Rate among Type Ia Supernovae. Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu. 546, 734 (2001)

MHD Equation of State with Relativistic Electrons. Zhigang Gong, Werner Däppen, & Ladislav Zejda. 546, 1178 (2001)

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Star Counts across the Red Giant Branch Bump and Below. G. Bono, S. Cassisi, M. Zoccali, & G. Piotto. 546, L109 (2001)

Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe. 547, 345 (2001)

Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto. 547, 988 (2001)

Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren. 548, 323 (2001)

Evolution of Differentially Rotating Supermassive Stars to the Onset of Bar Instability. Kimberly C. B. New & Stuart L. Shapiro. 548, 439 (2001)

The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models. M. H. Montgomery, T. S. Metcalfe, & D. E. Winget. 548, L53 (2001)



- Morphology and Evolution of the Large Magellanic Cloud Planetary Nebulae. *Richard A. Shaw, Letizia Stanghellini, Max Mutchler, Bruce Balick, & J. Chris Blades.* 548, 727 (2001)
- Circumbinary Disks and Cataclysmic Variable Evolution. *H. C. Spruit & Ronald E. Taam.* 548, 900 (2001)
- Disk Locking and the Presence of Slow Rotators among Solar-Type Stars in Young Star Clusters. *Sydney Barnes, Sabatino Sofia, & Marc Pinsonneault.* 548, 1071 (2001)

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# STARS: FORMATION

- Irradiated Herbig-Haro Jets in the Orion Nebula and near NGC 1333. *John Bally & Bo Reipurth.* 546, 299 (2001)
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- Warm Dust Emission near W75 N IRS1: Evidence for Multiple Energetic Outflows. *D. S. Shepherd.* 546, 345 (2001)
- Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared. *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub.* 546, 358 (2001)
- Size-selective Concentration of Chondrules and Other Small Particles in Protoplanetary Nebula Turbulence. *Jeffrey N. Cuzzi, Robert C. Hogan, Julie M. Paque, & Anthony R. Dobrovolskis.* 546, 496 (2001)
- NGC 1333—Protostars, Dust Shells, and Triggered Star Formation. *Göran Sandell & Lewis B. G. Knee.* 546, L49 (2001)
- Measurement of the Magnetic Field Direction in the NGC 2024 FIR 5 Protostellar Outflow. *J. S. Greaves, W. S. Holand, & D. Ward-Thompson.* 546, L53 (2001)
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- Density, Velocity, and Magnetic Field Structure in Turbulent Molecular Cloud Models. *Eve C. Ostriker, James M. Stone, & Charles F. Gammie.* 546, 980 (2001)
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- A Shock-induced Photodissociation Region in the HH 80/81 Flow: Far-Infrared Spectroscopy. *Sergio Molinari, Alberto Noriega-Crespo, & Luigi Spinoglio.* 547, 292 (2001)
- An Empirical Model for Protostellar Collapse. *A. P. Whitworth & D. Ward-Thompson.* 547, 317 (2001)
- LRG J0239–0134: A Ring Galaxy or a Pair of Superbubbles at  $z = 1$ ? *Yoshiaki Taniguchi & Takashi Murayama.* 547, L13 (2001)
- Supersonic Water Masers in 30 Doradus. *Jacco Th. van Loon & Albert A. Zijlstra.* 547, L61 (2001)
- The Milky Way in Molecular Clouds: A New Complete CO Survey. *T. M. Dame, Dap Hartmann, & P. Thaddeus.* 547, 792 (2001)
- An  $H^{13}CO^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada.* 547, 840 (2001)
- SiO Emission in the Multilobe Outflow Associated with IRAS 16293–2422. *Naomi Hirano, Hitomi Mikami, Tomofumi Umemoto, Satoshi Yamamoto, & Yoshiaki Taniguchi.* 547, 899 (2001)
- On the Initial Mass Function of Population III Stars. *Fumitaka Nakamura & Masayuki Umemura.* 548, 19 (2001)
- Molecular Gas and the Modest Star Formation Efficiency in the “Antennae” Galaxies: Arp 244=NGC 4038/39. *Yu Gao, K. Y. Lo, S.-W. Lee, & T.-H. Lee.* 548, 172 (2001)
- Millimeter-Wave Interferometric Study of the  $\rho$  Ophiuchi A Region. I. Small-Scale Structures of Dust Continuum Sources. *Takeshi Kamazaki, Masao Saito, Naomi Hirano, & Ryouhei Kawabe.* 548, 278 (2001)
- Infall Models of Class 0 Protostars. *Ray Jayawardhana, Lee Hartmann, & Nuria Calvet.* 548, 310 (2001)
- On the Hidden Nuclear Starburst in Arp 220. *Yasuhiro Shioya, Neil Trentham, & Yoshiaki Taniguchi.* 548, L29 (2001)
- The Snake: A Reconnecting Coil in a Twisted Magnetic Flux Tube. *Geoffrey V. Bicknell & Jianke Li.* 548, L69 (2001)

- The Origin of Chondrules and Refractory Inclusions in Chondritic Meteorites. *Frank H. Shu, Hsien Shang, Matthieu Gounelle, Alfred E. Glassgold, & Typhoon Lee.* 548, 1029 (2001)

- Extinct Radioactivities and Protosolar Cosmic Rays: Self-Shielding and Light Elements. *Matthieu Gounelle, Frank H. Shu, Hsien Shang, A. E. Glassgold, K. E. Rehm, & Typhoon Lee.* 548, 1051 (2001)

# STARS: FUNDAMENTAL PARAMETERS

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- Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper.* 548, 889 (2001)
- Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschildt, & Andreas Schweitzer.* 548, 908 (2001)

# STARS: HORIZONTAL-BRANCH

- Hot Horizontal-Branch Stars in the Galactic Bulge. I. *Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker.* 547, 240 (2001)

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# STARS: INDIVIDUAL

## Constellation Name: ET Andromedae

- Model Atmospheres with Individualized Abundances. *N. Piskunov & F. Kupka.* 547, 1040 (2001)

## Constellation Name: Aquila X-1

- Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)

## Constellation Name: 46 Aquilae

- The Origin of Mn II Emission in the Spectra of Chemically Peculiar Stars. *T. A. A. Sigut.* 546, L115 (2001)

## Constellation Name: V1432 Aquilae

- Time-resolved *Hubble Space Telescope* Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman.* 548, 410 (2001)

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## Constellation Name: $\eta$ Carinae

- The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre.* 547, 1034 (2001)

- Hubble Space Telescope* Proper-Motion Measurements of the  $\eta$  Carinae Nebula. *Jon A. Morse, James R. Kellogg, John Bally, Kris Davidson, Bruce Balick, & Dennis Ebbets.* 548, L207 (2001)

## Constellation Name: Centaurus X-4

- Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)

## Constellation Name: $\alpha$ Centauri

- Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using *Hubble Space Telescope* Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank.* 547, L49 (2001)

## Constellation Name: 3 Centauri A

- The Origin of Mn II Emission in the Spectra of Chemically Peculiar Stars. *T. A. A. Sigut.* 546, L115 (2001)

## Constellation Name: Proxima Centauri

- Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using *Hubble Space Telescope* Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank.* 547, L49 (2001)

**Constellation Name: Circinus X-1**

A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba.* 547, 412 (2001)

**Constellation Name:  $\rho$  Coronae Borealis**

A Combined *Hipparcos* and Multichannel Astrometric Photometer Study of the Proposed Planetary System of  $\rho$  Coronae Borealis. *George Gatewood, Inwoo Han, & David Black.* 548, L61 (2001)

**Constellation Name: Cygnus X-1**

Broadband Spectrum of Cygnus X-1 in Two Spectral States with *BeppoSAX*. *F. Frontera, E. Palazzi, A. A. Zdziarski, F. Haardt, G. C. Perola, L. Chiappetti, G. Cusumano, D. Dal Fiume, S. Del Sordo, M. Orlandini, A. N. Parmar, L. Piro, A. Santangelo, A. Segreto, A. Treves, & M. Trifoglio.* 546, 1027 (2001)

The Correlated Intensity and Spectral Evolution of Cygnus X-1 during State Transitions. *Lingling Wen, Wei Cui, & Hale V. Bradt.* 546, L105 (2001)

Probing the Inner Region of Cygnus X-1 in the Low/Hard State through Its X-Ray Broadband Spectrum. *T. Di Salvo, C. Done, P. T. Zycki, L. Burderi, & N. R. Robba.* 547, 1024 (2001)

**Constellation Name: V1974 Cygni**

Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschildt, S. Starrfield, & E. Baron.* 547, 1057 (2001)

**Constellation Name: Nova Cygni 1992**

Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschildt, S. Starrfield, & E. Baron.* 547, 1057 (2001)

**Constellation Name: BY Draconis**

A Preliminary Visual Orbit of BY Draconis. *A. F. Boden & B. F. Lane.* 547, 1071 (2001)

**Constellation Name: MN Hydrae**

Time-resolved *Hubble Space Telescope* Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman.* 548, 410 (2001)

**Constellation Name: GQ Lupi**

Variability of Southern T Tauri Stars. I. The Continuum and the H $\beta$  Inverse P Cygni Profile of GQ Lupi. *C. Batalha, D. F. Lopes, & N. M. Batalha.* 548, 377 (2001)

New Constraints on Protostellar Jet Collimation from High-Density Gas UV Tracers. *Ana I. Gómez de Castro & Eva Verdugo.* 548, 976 (2001)

**Constellation Name: V2301 Ophiuchi**

Time-resolved *Hubble Space Telescope* Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman.* 548, 410 (2001)

**Constellation Name:  $\zeta$  Orionis**

*Chandra* Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis. *Wayne L. Waldron & Joseph P. Cassinelli.* 548, L45 (2001)

**Constellation Name: V1309 Orionis**

Time-resolved *Hubble Space Telescope* Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman.* 548, 410 (2001)

**Constellation Name: Orion BN/KL**

Periodic Photometric Variability in the Becklin-Neugebauer Object. *Lynne A. Hillenbrand, John M. Carpenter, & M. F. Skrutskie.* 547, L53 (2001)

**Constellation Name: LS Pegasi**

Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi. *Pablo Rodriguez-Gil, Jorge Casares, Ignacio G. Martinez-Pais, Pasi Hakala, & Danny Steeghs.* 548, L49 (2001)

**Constellation Name: X Persei**

The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport.* 546, 455 (2001)

**Constellation Name: Scorpius X-1**

High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Tails in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber.* 547, L147 (2001)

**Constellation Name:  $\alpha$  Scorpii**

Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. *K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler.* 548, 861 (2001)

**Constellation Name: Sirius A**

The Abundance Patterns of Sirius and Vega. *H. M. Qui, G. Zhao, Y. Q. Chen, & Z. W. Li.* 548, 953 (2001)

**Constellation Name: AA Tauri**

Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Joung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)

**Constellation Name: CQ Tauri**

Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Joung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)

**Constellation Name: RY Tauri**

New Constraints on Protostellar Jet Collimation from High-Density Gas UV Tracers. *Ana I. Gómez de Castro & Eva Verdugo.* 548, 976 (2001)

**Constellation Name: V471 Tauri**

The Best Brown Dwarf Yet? A Companion to the Hyades Eclipsing Binary V471 Tauri. *Edward F. Guinan & Ignasi Ribas.* 546, L43 (2001)

**Bright Star Number: HR 5185**

A Sensitive Search for Methane in the Infrared Spectrum of  $\tau$  Bootis. *Günter Wiedemann, Drake Deming, & Gordon Bjoraker.* 546, 1068 (2001)

**Bright Star Number: HR 8023**

Detection of the Faint Companion in the Massive Binary HD 199579. *A. M. Williams, D. R. Gies, W. G. Bagnuolo, Jr., D. H. Berger, P. A. Erling, T. J. Fallon, J. A. Harvin, W. Huang, W. C. Jao, T. S. Josephs, J. P. McFarland, M. V. McSwain, R. L. Riddle, D. J. Wallace, D. W. Wingert, A. W. Fullerton, & C. T. Bolton.* 548, 425 (2001)

**Henry Draper Number: HD 36112**

Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Joung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)

**Henry Draper Number: HD 101065**

Model Atmospheres with Individualized Abundances. *N. Piskunov & F. Kupka.* 547, 1040 (2001)

**Henry Draper Number: HD 135240**

Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper.* 548, 889 (2001)

**Henry Draper Number: HD 177989**

STIS and GHRS Observations of Warm and Hot Gas Overlying the Stutium Supershell (GS 018–04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk.* 547, 907 (2001)

**Henry Draper Number: HD 199579**

Detection of the Faint Companion in the Massive Binary HD 199579. *A. M. Williams, D. R. Gies, W. G. Bagnuolo, Jr., D. H. Berger, P. A. Erling, T. J. Fallon, J. A. Harvin, W. Huang, W. C. Jao, T. S. Josephs, J. P. McFarland, M. V. McSwain, R. L. Riddle, D. J. Wallace, D. W. Wingert, A. W. Fullerton, & C. T. Bolton.* 548, 425 (2001)

**Name: Capella**

The *Chandra* Iron L X-Ray Line Spectrum of Capella. *Ehud Behar, Jean Cottam, & Steven M. Kahn.* 548, 966 (2001)

**Name: Feige 34**

A Search for Jovian Planets around Hot White Dwarfs. *You-Hua Chu, Bryan C. Dunne, & Robert A. Gruendl.* 546, L61 (2001)

**Name: Rapid Burster 1730–335**

Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)

**Name: Vega**

Model Atmospheres with Individualized Abundances. *N. Piskunov & F. Kupka.* 547, 1040 (2001)

The Abundance Patterns of Sirius and Vega. *H. M. Qui, G. Zhao, Y. Q. Chen, & Z. W. Li.* 548, 953 (2001)

# Alphanumeric: AFGL 2298

Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman.* 548, 1020 (2001)

# Alphanumeric: CRL 618

*Infrared Space Observatory's* Discovery of C<sub>4</sub>H<sub>2</sub>, C<sub>6</sub>H<sub>2</sub>, and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters.* 546, L123 (2001)

Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters.* 546, L127 (2001)

# Alphanumeric: CRL 2688

*Infrared Space Observatory's* Discovery of C<sub>4</sub>H<sub>2</sub>, C<sub>6</sub>H<sub>2</sub>, and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters.* 546, L123 (2001)

Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters.* 546, L127 (2001)

# Alphanumeric: 1E 1740.7–2942

Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942. *Wei Cui, N. S. Schulz, F. K. Baganoff, M. W. Bautz, J. P. Doty, G. P. Garmire, I. F. Mirabel, G. R. Ricker, L. F. Rodríguez, & S. C. Taylor.* 548, 394 (2001)

# Alphanumeric: EXO 0748–676

Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)

# Alphanumeric: GRS 1915+105

Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. *S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan.* 546, 1075 (2001)

The X-Ray Properties of Low-Frequency Quasi-periodic Oscillations from GRS 1915+105 up to 120 keV. *John A. Tomsick & Philip Kaaret.* 548, 401 (2001)

Disk-Jet Connection in the Microquasar GRS 1915+105 and Infrared and Radio Emission. *J. S. Yadav.* 548, 876 (2001)

# Alphanumeric: GX 354–0

ASCA Observations of GX 354–0 and KS 1731–260. *T. Narita, J. E. Grindlay, & D. Barret.* 547, 420 (2001)

# Alphanumeric: IRAS 18576+0341

Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman.* 548, 1020 (2001)

# Alphanumeric: KS 1731–260

ASCA Observations of GX 354–0 and KS 1731–260. *T. Narita, J. E. Grindlay, & D. Barret.* 547, 420 (2001)

# Alphanumeric: LkCa 15

Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Jung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)

# Alphanumeric: MWC 480

Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Jung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)

# Alphanumeric: NGC 2363-V1

Physical Parameters of Erupting Luminous Blue Variables: NGC 2363–V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier.* 546, 484 (2001)

# Alphanumeric: NGC 7027

*Infrared Space Observatory's* Discovery of C<sub>4</sub>H<sub>2</sub>, C<sub>6</sub>H<sub>2</sub>, and Benzene in CRL 618. *José Cernicharo, Ana M. Heras, A. G. G. M. Tielens, Juan R. Pardo, Fabrice Herpin, Michel Guélin, & L. B. F. M. Waters.* 546, L123 (2001)

Methylpolyynes and Small Hydrocarbons in CRL 618. *José Cernicharo, Ana M. Heras, Juan R. Pardo, A. G. G. M. Tielens, Michel Guélin, E. Dartois, R. Neri, & L. B. F. M. Waters.* 546, L127 (2001)

# Alphanumeric: SAX J1808.4–3658

Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)

# Alphanumeric: SMC X-2

Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from *RXTE* Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler.* 548, L41 (2001)

# Alphanumeric: 4U 0352+30

The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport.* 546, 455 (2001)

# Alphanumeric: 4U 1608–522

Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)

# Alphanumeric: 4U 1728–34

Study of the Temporal Behavior of 4U 1728–34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba.* 546, 1107 (2001)

# Alphanumeric: WR 16

Tailored Analyses of the WN 8 Stars WR 40 and WR 16. *J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck.* 548, 932 (2001)

# Alphanumeric: WR 40

Tailored Analyses of the WN 8 Stars WR 40 and WR 16. *J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck.* 548, 932 (2001)

# Alphanumeric: X0614+091

Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091. *Frits Paerels, A. C. Brinkman, R. L. J. van der Meer, J. S. Kaastra, E. Kuulkers, A. J. F. den Boggen, P. Predehl, Jeremy J. Drake, Steven M. Kahn, Daniel W. Savin, & Brendan M. McLaughlin.* 546, 338 (2001)

# Alphanumeric: XB 1254–690

A Hard Tail in the Broadband Spectrum of the Dipper XB 1254–690. *R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba.* 548, 883 (2001)

# Alphanumeric: XTE J1550–564

Optical Observations of the Black Hole Candidate XTE J1550–564 during Reflare and Quiescence. *Raj K. Jain, Charles D. Bailyn, Jerome A. Orosz, Jeffrey E. McClintock, Gregory J. Sobczak, & Ronald A. Remillard.* 546, 1086 (2001)

## STARS: INTERIORS

Cold Ideal Equation of State for Strongly Magnetized Neutron-Star Matter: Effects on Muon Production and Pion Condensation. *In-Saeng Suh & G. J. Mathews.* 546, 1126 (2001)

Magnetic Field Effect on Masses of Atomic Nuclei. *V. N. Kondratyev, Toshiaki Maruyama, & Satoshi Chiba.* 546, 1137 (2001)

Star Counts across the Red Giant Branch Bump and Below. *G. Bono, S. Cassisi, M. Zoccali, & G. Piotto.* 546, L109 (2001)

Magnetic Diffusion in Stratified Atmospheres. *E. E. DeLuca & N. E. Hurlburt.* 548, 1093 (2001)

## STARS: LATE-TYPE

The Best Brown Dwarf Yet? A Companion to the Hyades Eclipsing Binary V471 Tauri. *Edward F. Guinan & Ignasi Ribas.* 546, L43 (2001)

Modeling CO Emission from Mira's Wind. *N. Ryde & F. L. Schöier.* 547, 384 (2001)

Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin.* 548, L81 (2001)

Mid-Infrared Images of the Circumstellar Dust around  $\alpha$  Scorpii. *K. A. Marsh, E. E. Bloemhof, D. W. Koerner, & M. E. Ressler.* 548, 861 (2001)

Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschildt, & Andreas Schweizer.* 548, 908 (2001)



**STARS: LOW-MASS, BROWN DWARFS**

The Best Brown Dwarf Yet? A Companion to the Hyades Eclipsing Binary V471 Tauri. *Edward F. Guinan & Ignasi Ribas.* 546, L43 (2001)

Infrared Spectra and Spectral Energy Distributions of Late M and L Dwarfs. *S. K. Leggett, F. Allard, T. R. Geballe, P. H. Hauschildt, & Andreas Schweitzer.* 548, 908 (2001)

**STARS: LUMINOSITY FUNCTION, MASS FUNCTION**

From the Top to the Bottom of the Main Sequence: A Complete Mass Function of the Young Open Cluster M35. *David Barrado y Navascués, John R. Stauffer, Jerome Bouvier, & Eduardo L. Martín.* 546, 1006 (2001)

**STARS: MAGNETIC FIELDS**

Cold Ideal Equation of State for Strongly Magnetized Neutron-Star Matter: Effects on Muon Production and Pion Condensation. *In-Saeng Suh & G. J. Mathews.* 546, 1126 (2001)

Magnetic Field Effect on Masses of Atomic Nuclei. *V. N. Kondratyev, Toshiki Maruyama, & Satoshi Chiba.* 546, 1137 (2001)

The Hanle Effect as a Diagnostic of Magnetic Fields in Stellar Envelopes. III. Including the Finite Star Depolarization Effect. *R. Ignace.* 547, 393 (2001)

Simulations of the Photospheric Magnetic Activity and Outer Atmospheric Radiative Losses of Cool Stars Based on Characteristics of the Solar Magnetic Field. *Carolus J. Schrijver.* 547, 475 (2001)

Implications of the Optical Observations of Isolated Neutron Stars. *Andy Shearer & Aaron Golden.* 547, 967 (2001)

Time-resolved *Hubble Space Telescope* Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman.* 548, 410 (2001)

*Chandra* Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis. *Wayne L. Waldron & Joseph P. Cassinelli.* 548, L45 (2001)

Disk Locking and the Presence of Slow Rotators among Solar-Type Stars in Young Star Clusters. *Sydney Barnes, Sabatino Sofia, & Marc Pinsonneault.* 548, 1071 (2001)

Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. *Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath.* 548, L193 (2001)

**STARS: MASS LOSS**

Kinematics of Molecular Hydrogen Emission from Pre-Planetary Nebulae: RAFGL 2688 and RAFGL 618. *Joel H. Kastner, David A. Weintraub, Ian Gatley, & LeeAnn Henn.* 546, 279 (2001)

Warm Dust Emission near W75 N IRS1: Evidence for Multiple Energetic Outflows. *D. S. Shepherd.* 546, 345 (2001)

Physical Parameters of Erupting Luminous Blue Variables: NGC 2363—V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier.* 546, 484 (2001)

Modeling CO Emission from Mira's Wind. *N. Ryde & F. L. Schöier.* 547, 384 (2001)

*Chandra* Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis. *Wayne L. Waldron & Joseph P. Cassinelli.* 548, L45 (2001)

New Constraints on Protostellar Jet Collimation from High-Density Gas UV Tracers. *Ana I. Gómez de Castro & Eva Verdugo.* 548, 976 (2001)

Discovery of an Extended Dust Emission around IRAS 18576+0341 (AFGL 2298) at 10.3 and 18.0 Microns: A New Luminous Blue Variable Candidate? *Toshiya Ueta, Margaret Meixner, Aditya Dayal, Lynne K. Deutsch, Giovanni G. Fazio, Joseph L. Hora, & William F. Hoffman.* 548, 1020 (2001)

**STARS: NEUTRON**

Polarization Sweeps in Rotation-powered Pulsars. *Johann A. Hibschan & Jonathan Arons.* 546, 382 (2001)

Single-Pulse Characteristics of the Millisecond Radio Pulsar PSR B1937+21 at 430 MHz. *F. A. Jenet, S. B. Anderson, & T. A. Prince.* 546, 394 (2001)

Synchrotron Model for the Infrared, Optical, and X-Ray Emission of the Crab Pulsar. *André R. Crusius-Wätzell, Thomas Kunz, & Harald Lesch.* 546, 401 (2001)

The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport.* 546, 455 (2001)

Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. *Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb.* 546, 1098 (2001)

Study of the Temporal Behavior of 4U 1728—34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba.* 546, 1107 (2001)

*r*-Modes of Neutron Stars with a Solid Crust. *Shijun Yoshida & Umin Lee.* 546, 1121 (2001)

Cold Ideal Equation of State for Strongly Magnetized Neutron-Star Matter: Effects on Muon Production and Pion Condensation. *In-Saeng Suh & G. J. Mathews.* 546, 1126 (2001)

Magnetic Field Effect on Masses of Atomic Nuclei. *V. N. Kondratyev, Toshiki Maruyama, & Satoshi Chiba.* 546, 1137 (2001)

*Chandra* Observations of the Young Pulsar PSR B0540—69. *P. Kaaret, H. L. Marshall, T. L. Aldcroft, D. E. Graessle, M. Karovska, S. S. Murray, A. H. Rots, N. S. Schulz, & F. D. Seward.* 546, 1159 (2001)

Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe.* 547, 345 (2001)

Accretion Disk Boundary Layers around Neutron Stars: X-Ray Production in Low-Mass X-Ray Binaries. *Robert Popham & Rashid Sunyaev.* 547, 355 (2001)

A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba.* 547, 412 (2001)

ASCA Observations of GX 354—0 and KS 1731—260. *T. Narita, J. E. Grindlay, & D. Barret.* 547, 420 (2001)

*Ginga* Observations of Hercules X-1: Spectrum Dependence on 35 Day Phase. *D. A. Leahy.* 547, 449 (2001)

Does Pulsar B1757—24 Have a fallback Disk? *D. Marsden, R. E. Lingenfelter, & R. E. Rothschild.* 547, L45 (2001)

Photon Splitting and Pair Creation in Highly Magnetized Pulsars. *Matthew G. Baring & Alice K. Harding.* 547, 929 (2001)

Charge Densities above Pulsar Polar Caps. *Axel Jessner, Harald Lesch, & Thomas Kunz.* 547, 959 (2001)

Implications of the Optical Observations of Isolated Neutron Stars. *Andy Shearer & Aaron Golden.* 547, 967 (2001)

The X-Ray Photoionized Wind in Cen X-3/V779 Cen. *Patrick S. Wojdowski, Duane A. Liedahl, & Masao Sako.* 547, 973 (2001)

A Neutron Star Identification for the High-Energy Gamma-Ray Source 3EG J1835+5918 Detected in the *ROSAT* All-Sky Survey. *N. Mirabel & J. P. Halpern.* 547, L137 (2001)

High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Tails in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber.* 547, L147 (2001)

Does the Mass Accretion Rate Depend on the Radius of the Accreting Star? *Abraham Loeb, Ramesh Narayan, & John C. Raymond.* 547, L151 (2001)

Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan.* 548, 368 (2001)

Observations of a Series of Six Recent Glitches in the Crab Pulsar. *Tony Wong, D. C. Backer, & A. G. Lyne.* 548, 447 (2001)

Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from *RXTE* Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler.* 548, L41 (2001)

The Central X-Ray Point Source in Cassiopeia A. *Deepti Chakrabarty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan.* 548, 800 (2001)

New Optical Constraints on the Presence of a Compact Central Object in Cassiopeia A. *Erin Ryan, R. Mark Wagner, & Sumner G. Starrfield.* 548, 811 (2001)

Simulations of Accretion Flows Crossing the Last Stable Orbit. *Philip J. Armitage, Christopher S. Reynolds, & James Chiang.* 548, 868 (2001)

A Hard Tail in the Broadband Spectrum of the Dipper XB 1254—690. *R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba.* 548, 883 (2001)

Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. *Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro.* 548, 919 (2001)

Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)

Neutron Stars with a Stable, Light Supersymmetric Baryon. *Shmuel Balberg, Glennys R. Farrar, & Tsvi Piran.* 548, L179 (2001)

Intrinsic and Reprocessed Optical Emission from the Companion to PSR J2051—0827. *B. W. Stappers, M. H. van Kerkwijk, J. F. Bell, & S. R. Kulkarni.* 548, L183 (2001)

The X-Ray Sources at the Center of the Supernova Remnant RX J0852.0—4622. *S. Mereghetti.* 548, L213 (2001)

**STARS: NOVAE, CATAclysmic VARIABLES**

- Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschildt, S. Starrfield, & E. Baron.* 547, 1057 (2001)
- Time-resolved *Hubble Space Telescope* Spectroscopy of Four Eclipsing Magnetic Cataclysmic Variables. *Gary D. Schmidt & H. S. Stockman.* 548, 410 (2001)
- Evidence of Magnetic Accretion in an SW Sex Star: Discovery of Variable Circular Polarization in LS Pegasi. *Pablo Rodríguez-Gil, Jorge Casares, Ignacio G. Martínez-Pais, Pasi Hakala, & Danny Steeghs.* 548, L49 (2001)
- Circumbinary Disks and Cataclysmic Variable Evolution. *H. C. Spruit & Ronald E. Taam.* 548, 900 (2001)

**STARS: OSCILLATIONS**

- Gravity Modes in ZZ Ceti Stars. IV. Amplitude Saturation by Parametric Instability. *Yanqin Wu & Peter Goldreich.* 546, 469 (2001)
- $r$ -Modes of Neutron Stars with a Solid Crust. *Shijun Yoshida & Umin Lee.* 546, 1121 (2001)
- The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models. *M. H. Montgomery, T. S. Metcalfe, & D. E. Winget.* 548, L53 (2001)

**STARS: PECULIAR**

- New Optical Constraints on the Presence of a Compact Central Object in Cassiopeia A. *Erin Ryan, R. Mark Wagner, & Sumner G. Starrfield.* 548, 811 (2001)

**STARS: PLANETARY SYSTEMS**

- Ages of A-Type Vega-like Stars from  $uvby\beta$  Photometry. *Inseok Song, J.-P. Caillault, David Barrado y Navascués, & John R. Stauffer.* 546, 352 (2001)
- Size-selective Concentration of Chondrules and Other Small Particles in Protoplanetary Nebula Turbulence. *Jeffrey N. Cuzzi, Robert C. Hogan, Julie M. Paque, & Anthony R. Dobrovolskis.* 546, 496 (2001)
- A Search for Jovian Planets around Hot White Dwarfs. *You-Hua Chu, Bryan C. Dunne, & Robert A. Gruendl.* 546, L61 (2001)
- Comparison of the Two Follow-up Observation Strategies for Gravitational Microlensing Planet Searches. *Cheongho Han & Yong-Gi Kim.* 546, 975 (2001)
- A Sensitive Search for Methane in the Infrared Spectrum of  $\tau$  Bootis. *Günter Wiedemann, Drake Deming, & Gordon Björaker.* 546, 1068 (2001)
- Three-dimensional Simulations of a Planet Embedded in a Protoplanetary Disk. *Wilhelm Kley, Gennaro D'Angelo, & Thomas Henning.* 547, 457 (2001)
- The Magnetorotational Instability across the Dead Zone of Protoplanetary Disks. *M. Reyes-Ruiz.* 547, 465 (2001)
- Discovery of Two Relativistic Neutron Star–White Dwarf Binaries. *R. T. Edwards & M. Bailes.* 547, L37 (2001)
- On the Tidal Inflation of Short-Period Extrasolar Planets. *Peter Bodenheimer, D. N. C. Lin, & R. A. Mardling.* 548, 466 (2001)
- Preliminary Astrometric Masses for Proposed Extrasolar Planetary Companions. *Inwoo Han, David C. Black, & George Gatewood.* 548, L57 (2001)
- A Combined *Hipparcos* and Multichannel Astrometric Photometer Study of the Proposed Planetary System of  $\rho$  Coronae Borealis. *George Gatewood, Inwoo Han, & David Black.* 548, L61 (2001)
- Detection of Earth-like Planets Using Apodized Telescopes. *Peter Nisenson & Costas Papaliolios.* 548, L201 (2001)

**STARS: POPULATION II**

- Ultra-Lithium-deficient Halo Stars and Blue Stragglers: A Common Origin? *Sean G. Ryan, Timothy C. Beers, Toshitaka Kajino, & Katarina Rosolankova.* 547, 231 (2001)

**STARS: PRE-MAIN-SEQUENCE**

- Irradiated Herbig-Haro Jets in the Orion Nebula and near NGC 1333. *John Bally & Bo Reipurth.* 546, 299 (2001)
- Periodic Photometric Variability in the Becklin-Neugebauer Object. *Lynne A. Hillenbrand, John M. Carpenter, & M. F. Skrutskie.* 547, L53 (2001)
- An  $\text{H}^{13}\text{CO}^+$  Survey for Dense Envelopes around Low-Mass Embedded Sources in Taurus. *M. Saito, R. Kawabe, Y. Kitamura, & K. Sunada.* 547, 840 (2001)
- Spectral Energy Distributions of Passive T Tauri and Herbig Ae Disks: Grain Mineralogy, Parameter Dependences, and Comparison with *Infrared Space Observatory* LWS Observations. *E. I. Chiang, M. K. Joung, M. J. Creech-Eakman, C. Qi, J. E. Kessler, G. A. Blake, & E. F. van Dishoeck.* 547, 1077 (2001)

- Infall Models of Class 0 Protostars. *Ray Jayawardhana, Lee Hartmann, & Nuria Calvet.* 548, 310 (2001)

- Variability of Southern T Tauri Stars. I. The Continuum and the  $\text{H}\beta$  Inverse P Cygni Profile of GQ Lupi. *C. Batalha, D. F. Lopes, & N. M. Batalha.* 548, 377 (2001)

- New Constraints on Protostellar Jet Collimation from High-Density Gas UV Tracers. *Ana I. Gómez de Castro & Eva Verdugo.* 548, 976 (2001)

- Disk Locking and the Presence of Slow Rotators among Solar-Type Stars in Young Star Clusters. *Sydney Barnes, Sabatino Sofia, & Marc Pinsonneault.* 548, 1071 (2001)

**STARS: PULSARS: GENERAL**

- Polarization Sweeps in Rotation-powered Pulsars. *Johann A. Hirsbman & Jonathan Arons.* 546, 382 (2001)
- Single-Pulse Characteristics of the Millisecond Radio Pulsar PSR B1937+21 at 430 MHz. *F. A. Jenet, S. B. Anderson, & T. A. Prince.* 546, 394 (2001)
- Chandra* Observations of the Young Pulsar PSR B0540–69. *P. Kaaret, H. L. Marshall, T. L. Aldcroft, D. E. Graessle, M. Karovska, S. S. Murray, A. H. Rots, N. S. Schulz, & F. D. Seward.* 546, 1159 (2001)
- A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. *J. P. Halpern, E. V. Gotthelf, K. M. Leighly, & D. J. Helfand.* 547, 323 (2001)
- Reconnection in a Striped Pulsar Wind. *Y. Lyubarsky & J. G. Kirk.* 547, 437 (2001)
- Photon Splitting and Pair Creation in Highly Magnetized Pulsars. *Matthew G. Baring & Alice K. Harding.* 547, 929 (2001)
- Charge Densities above Pulsar Polar Caps. *Axel Jessner, Harald Lesch, & Thomas Kunz.* 547, 959 (2001)
- Implications of the Optical Observations of Isolated Neutron Stars. *Andy Shearer & Aaron Golden.* 547, 967 (2001)
- Off-Beam Gamma-Ray Pulsars and Unidentified Egret Sources in the Gould Belt. *Alice K. Harding & Bing Zhang.* 548, L37 (2001)
- Discovery of Short-Period Binary Millisecond Pulsars in Four Globular Clusters. *N. D'Amico, A. G. Lyne, R. N. Manchester, A. Possenti, & F. Camilo.* 548, L171 (2001)

**STARS: PULSARS: INDIVIDUAL**
**Name: Crab Pulsar**

- Reconnection in a Striped Pulsar Wind. *Y. Lyubarsky & J. G. Kirk.* 547, 437 (2001)
- High-Energy Gamma-Ray Observations of the Crab Nebula and Pulsar with the Solar Tower Atmospheric Cerenkov Effect Experiment. *S. Oser, D. Bhattacharya, L. M. Boone, M. C. Chantrell, Z. Conner, C. E. Couvaut, M. Dragovan, P. Fortin, D. T. Gregorich, D. S. Hanna, R. Mukherjee, R. A. Ong, K. Ragan, R. A. Scalzo, D. R. Schuette, C. G. Theoret, T. O. Tumer, D. A. Williams, & J. A. Zweerink.* 547, 949 (2001)
- Observations of a Series of Six Recent Glitches in the Crab Pulsar. *Tony Wong, D. C. Backer, & A. G. Lyne.* 548, 447 (2001)

**Name: Hercules X-1**

- Ginga* Observations of Hercules X-1: Spectrum Dependence on 35 Day Phase. *D. A. Leahy.* 547, 449 (2001)

**Alphanumeric: B0823+26**

- Single-Pulse Characteristics of the Millisecond Radio Pulsar PSR B1937+21 at 430 MHz. *F. A. Jenet, S. B. Anderson, & T. A. Prince.* 546, 394 (2001)

**Alphanumeric: B1937+21**

- Single-Pulse Characteristics of the Millisecond Radio Pulsar PSR B1937+21 at 430 MHz. *F. A. Jenet, S. B. Anderson, & T. A. Prince.* 546, 394 (2001)

**Alphanumeric: PSR 0531+21**

- Synchrotron Model for the Infrared, Optical, and X-Ray Emission of the Crab Pulsar. *André R. Crusius-Wätzell, Thomas Kunz, & Harald Lesch.* 546, 401 (2001)

**Alphanumeric: PSR 0540–69**

- Chandra* Observations of the Young Pulsar PSR B0540–69. *P. Kaaret, H. L. Marshall, T. L. Aldcroft, D. E. Graessle, M. Karovska, S. S. Murray, A. H. Rots, N. S. Schulz, & F. D. Seward.* 546, 1159 (2001)

**Alphanumeric: PSR B1757–24**

- Does Pulsar B1757–24 Have a fallback Disk? *D. Marsden, R. E. Lingenfelter, & R. E. Rothschild.* 547, L45 (2001)

**Alphanumeric: PSR J1807–2459**

- A Binary Millisecond Pulsar in Globular Cluster NGC 6544. *Scott M. Ransom, Lincoln J. Greenhill, James R. Herrnstein, Richard N. Manchester, Fernando Camilo, Stephen S. Eikenberry, & Andrew G. Lyne.* 546, L25 (2001)

**Alphanumeric: PSR J2051—0827**

Intrinsic and Reprocessed Optical Emission from the Companion to PSR J2051—0827. *B. W. Stappers, M. H. van Kerkwijk, J. F. Bell, & S. R. Kulkarni.* 548, L183 (2001)

**Alphanumeric: 4U 1907+09**

Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan.* 548, 368 (2001)

**STARS: ROTATION**

*r*-Modes of Neutron Stars with a Solid Crust. *Shijun Yoshida & Umin Lee.* 546, 1121 (2001)

Evolution of Stellar Collision Products in Globular Clusters. II. Off-Axis Collisions. *Alison Sills, Joshua A. Faber, James C. Lombardi, Jr., Frederic A. Rasio, & Aaron R. Warren.* 548, 323 (2001)

Evolution of Differentially Rotating Supermassive Stars to the Onset of Bar Instability. *Kimberly C. B. New & Stuart L. Shapiro.* 548, 439 (2001)

Dynamical Bar Instability in Rotating Stars: Effects of General Relativity. *Motoyuki Saijo, Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro.* 548, 919 (2001)

Disk Locking and the Presence of Slow Rotators among Solar-Type Stars in Young Star Clusters. *Sydney Barnes, Sabatino Sofia, & Marc Pinsonneault.* 548, 1071 (2001)

**STARS: STATISTICS**

Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe.* 547, 345 (2001)

**STARS: SUPERGIANTS**

First Stellar Abundances in NGC 6822 from VLT-UVES and Keck-HIRES Spectroscopy. *K. A. Venn, D. J. Lennon, A. Kaufer, J. K. McCarthy, N. Przybilla, R. P. Kudritzki, M. Lemke, E. D. Skillman, & S. J. Smartt.* 547, 765 (2001)

**STARS: SUPERNOVAE: GENERAL**

The Jet and Circumburst Stellar Wind of GRB 980519. *A. O. Jaunsen, J. Hjorth, G. Björnsson, M. I. Andersen, H. Pedersen, K. Kjærsmo, H. Korhonen, P. M. Sørensen, & E. Palazzi.* 546, 127 (2001)

The Orbit of X Persei and Its Neutron Star Companion. *Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport.* 546, 455 (2001)

Monte Carlo Simulations of Type Ia Supernova Observations in Supernova Surveys. *Weidong Li, Alexei V. Filippenko, & Adam G. Riess.* 546, 719 (2001)

A High Intrinsic Peculiarity Rate among Type Ia Supernovae. *Weidong Li, Alexei V. Filippenko, Richard R. Treffers, Adam G. Riess, Jingyao Hu, & Yulei Qiu.* 546, 734 (2001)

The Metal Enrichment and Temperature of the Intergalactic Medium. *Renyue Cen & Greg L. Bryan.* 546, L81 (2001)

X-Ray Spectral Features from Gamma-Ray Bursts: Predictions of Progenitor Models. *Markus Böttcher & Chris L. Fryer.* 547, 338 (2001)

What is the Cosmic-Ray Luminosity of Our Galaxy? *Arnon Dar & A. De Rújula.* 547, L33 (2001)

Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto.* 547, 988 (2001)

Supernova 1991T and the Value of the Hubble Constant. *Brad K. Gibson & Peter B. Stetson.* 547, L103 (2001)

Central Elemental Abundance Ratios in the Perseus Cluster: Resonant Scattering or SN Ia Enrichment? *Renato A. Dupke & Keith A. Arnaud.* 548, 141 (2001)

Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. *Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath.* 548, L193 (2001)

**STARS: SUPERNOVAE: INDIVIDUAL****Name: Cassiopeia A**

The Central X-Ray Point Source in Cassiopeia A. *Depto Chakraborty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan.* 548, 800 (2001)

New Optical Constraints on the Presence of a Compact Central Object in Cassiopeia A. *Erin Ryan, R. Mark Wagner, & Sumner G. Starrfield.* 548, 811 (2001)

**Alphanumeric: SN 1984A**

SN 1984A and Delayed-Detonation Models of Type Ia Supernovae. *Eric J. Lentz, E. Baron, David Branch, & Peter H. Hauschildt.* 547, 402 (2001)

**Alphanumeric: SN 1998S**

Analysis of the Type II<sub>n</sub> SN 1998S: Effects of Circumstellar Interaction on Observed Spectra. *Eric J. Lentz, E. Baron, Peter Lundqvist, David Branch, Peter H. Hauschildt, Claes Fransson, Peter Garnavich, Nate Bastian, Alexei V. Filippenko, R. P. Kirshner, P. M. Challis, S. Jha, Bruno Leibundgut, R. McCray, E. Michael, Nino Panagia, M. M. Phillips, C. S. J. Pun, Brian Schmidt, George Sonneborn, N. B. Suntzeff, L. Wang, & J. C. Wheeler.* 547, 406 (2001)

**Alphanumeric: SN 1998bw**

On the Kinematics of GRB 980425 and Its Association with SN 1998bw. *Jay D. Salmonson.* 546, L29 (2001)

**STARS: VARIABLES: CEPHEIDS**

Supernova 1991T and the Value of the Hubble Constant. *Brad K. Gibson & Peter B. Stetson.* 547, L103 (2001)

**STARS: VARIABLES: OTHER**

Physical Parameters of Erupting Luminous Blue Variables: NGC 2363—V1 Caught in the Act. *Laurent Drissen, Paul A. Crowther, Linda J. Smith, Carmelle Robert, Jean-René Roy, & D. John Hillier.* 546, 484 (2001)

Hot Horizontal-Branch Stars in the Galactic Bulge. *I. Ruth C. Peterson, Donald M. Terndrup, Elaine M. Sadler, & Alistair R. Walker.* 547, 240 (2001)

Periodic Photometric Variability in the Becklin-Neugebauer Object. *Lynne A. Hillenbrand, John M. Carpenter, & M. F. Skrutskie.* 547, L53 (2001)

Stellar Variability in the Metal-rich, Obscured Globular Cluster Terzan 5. *Peter D. Edmonds, Jonathan E. Grindlay, Haldan Cohn, & Phyllis Lugger.* 547, 829 (2001)

The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre.* 547, 1034 (2001)

Variability of Southern T Tauri Stars. I. The Continuum and the H $\beta$  Inverse P Cygni Profile of GQ Lupi. *C. Batalha, D. F. Lopes, & N. M. Batalha.* 548, 377 (2001)

New Constraints on Protostellar Jet Collimation from High-Density Gas UV Tracers. *Ana I. Gómez de Castro & Eva Verdugo.* 548, 976 (2001)

**STARS: WHITE DWARFS**

Gravity Modes in ZZ Ceti Stars. IV. Amplitude Saturation by Parametric Instability. *Yanqin Wu & Peter Goldreich.* 546, 469 (2001)

The Best Brown Dwarf Yet? A Companion to the Hyades Eclipsing Binary V471 Tauri. *Edward F. Guinan & Ignasi Ribas.* 546, L43 (2001)

A Search for Jovian Planets around Hot White Dwarfs. *You-Hua Chu, Bryan C. Dunne, & Robert A. Gruendl.* 546, L61 (2001)

The Luminosity Function of Magnitude and Proper-Motion-selected Samples: The Case of White Dwarfs. *René A. Méndez & Maria Teresa Ruiz.* 547, 252 (2001)

Evolution of Neutron Star, Carbon-Oxygen White Dwarf Binaries. *G. E. Brown, C.-H. Lee, S. F. Portegies Zwart, & H. A. Bethe.* 547, 345 (2001)

Discovery of Two Relativistic Neutron Star–White Dwarf Binaries. *R. T. Edwards & M. Bailes.* 547, L37 (2001)

A New (Old) Component of the Galaxy as the Origin of the Observed Large Magellanic Cloud Microlensing Events. *Evalyn I. Gates & Geza Gyuk.* 547, 786 (2001)

Can Differences in the Nickel Abundance in the Chandrasekhar Mass Models Explain the Relation between Brightness and Decline Rate of Normal Type Ia Supernovae? *Paolo A. Mazzali, Kenichi Nomoto, Enrico Cappellaro, Takayoshi Nakamura, Hideyuki Umeda, & Koichi Iwamoto.* 547, 988 (2001)

Does the Mass Accretion Rate Depend on the Radius of the Accreting Star? *Abraham Loeb, Ramesh Narayan, & John C. Raymond.* 547, L151 (2001)

The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models. *M. H. Montgomery, T. S. Metcalfe, & D. E. Winget.* 548, L53 (2001)

Magnetic Field Effects on the Thermonuclear Combustion Front of Chandrasekhar Mass White Dwarfs. *Cristian R. Ghezzi, Elisabete M. de Gouveia Dal Pino, & Jorge E. Horvath.* 548, L193 (2001)

**STARS: WINDS, OUTFLOWS**

Observability of Stellar Winds from Late-Type Dwarfs via Charge Exchange X-Ray Emission. *Bradford J. Wargelin & Jeremy J. Drake.* 546, L57 (2001)



- Reconnection in a Striped Pulsar Wind. *Y. Lyubarsky & J. G. Kirk.* 547, 437 (2001)
- Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using *Hubble Space Telescope* Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank.* 547, L49 (2001)
- The X-Ray Photoionized Wind in Cen X-3/V779 Cen. *Patrick S. Wojdowski, Duane A. Liedahl, & Masao Sako.* 547, 973 (2001)
- Stellar Spectroscopy Far beyond the Local Group. *Fabio Bresolin, Rolf-Peter Kudritzki, Roberto H. Mendez, & Norbert Przybilla.* 548, L159 (2001)

**STARS: WOLF-RAYET**

- Tailored Analyses of the WN 8 Stars WR 40 and WR 16. *J. E. Herald, D. J. Hillier, & R. E. Schulte-Ladbeck.* 548, 932 (2001)

**STELLAR DYNAMICS**

- How Many Young Star Clusters Exist in the Galactic Center? *Simon F. Portegies Zwart, Junichiro Makino, Stephen L. W. McMillan, & Piet Hut.* 546, L101 (2001)

**SUBMILLIMETER**

- Submillimeter Imaging of a Protocluster Region at  $z = 3.09$ . *Scott C. Chapman.* 548, L17 (2001)

- The Nature of the Bright Submillimeter Galaxy Population: A Radio-preselected Sample with  $I > \sim 25$ . *S. C. Chapman, E. A. Richards, G. F. Lewis, G. Wilson, & A. J. Barger.* 548, L147 (2001)

**SUN: ABUNDANCES**

- The Solar Helium Abundance in the Outer Corona Determined from Observations with SUMER/SOHO. *J. M. Laming & U. Feldman.* 546, 552 (2001)
- The Importance of Fe I as a Continuous Opacity Source in the Solar Atmosphere. *Roger A. Bell, Suchitra C. Balachandran, & Manuel Bautista.* 546, L65 (2001)
- The Abundance Patterns of Sirius and Vega. *H. M. Qui, G. Zhao, Y. Q. Chen, & Z. W. Li.* 548, 953 (2001)
- Heavy Ion Abundances and Spectra and the Large Gradual Solar Energetic Particle Event of 2000 July 14. *D. V. Reames, C. K. Ng, & A. J. Tylka.* 548, L233 (2001)

**SUN: ACTIVITY**

- Coronal Inflows and the Sun's Nonaxisymmetric Open Flux. *N. R. Sheeley, Jr., T. N. Knudson, & Y.-M. Wang.* 546, L131 (2001)
- Simulations of the Photospheric Magnetic Activity and Outer Atmospheric Radiative Losses of Cool Stars Based on Characteristics of the Solar Magnetic Field. *Carolus J. Schrijver.* 547, 475 (2001)
- Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson.* 548, 492 (2001)
- Deriving the Electron Density of the Solar Corona from the Inversion of Total Brightness Measurements. *A. P. Hayes, A. Vourlidas, & R. A. Howard.* 548, 1081 (2001)
- Low-Frequency Radio Observations of the Angular Broadening of the Crab Nebula Due to a Coronal Mass Ejection. *R. Ramesh, C. Kathiravan, & Ch. V. Sastry.* 548, L229 (2001)

**SUN: ATMOSPHERE**

- The Importance of Fe I as a Continuous Opacity Source in the Solar Atmosphere. *Roger A. Bell, Suchitra C. Balachandran, & Manuel Bautista.* 546, L65 (2001)
- A Note on Helioseismic Tomography. *S. D'Silva.* 547, L81 (2001)
- Quiet-Sun Variability in a Temperature Minimum Region. *Y. X. Zhang, C. Fang, M. D. Ding, & W. C. Livingston.* 547, L179 (2001)
- Note on an Exact Solution for Magnetoatmospheric Waves. *P. S. Cally.* 548, 473 (2001)
- Time-Distance Helioseismology at High Frequencies. *S. D'Silva.* 548, L107 (2001)

**SUN: ATMOSPHERIC MOTIONS**

- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet.* 547, 1148 (2001)
- An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region. *S. W. McIntosh, T. J. Bogdan, P. S. Cally, M. Carlsson, V. H. Hansteen, P. G. Judge, B. W. Lites, H. Peter, C. S. Rosenthal, & T. D. Tarbell.* 548, L237 (2001)

**SUN: CHROMOSPHERE**

- Quiet-Sun Variability in a Temperature Minimum Region. *Y. X. Zhang, C. Fang, M. D. Ding, & W. C. Livingston.* 547, L179 (2001)
- An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region. *S. W. McIntosh, T. J. Bogdan, P. S. Cally, M. Carlsson, V. H. Hansteen, P. G. Judge, B. W. Lites, H. Peter, C. S. Rosenthal, & T. D. Tarbell.* 548, L237 (2001)

**SUN: CORONA**

- Including the Transition Region in Models of the Large-Scale Solar Corona. *Roberto Lionello, Jon A. Linker, & Zoran Mikić.* 546, 542 (2001)
- The Solar Helium Abundance in the Outer Corona Determined from Observations with SUMER/SOHO. *J. M. Laming & U. Feldman.* 546, 552 (2001)
- Properties of Solar Polar Coronal Hole Plasmas Observed above the Limb. *G. A. Doschek, U. Feldman, J. M. Laming, U. Schühle, & K. Wilhelm.* 546, 559 (2001)
- Observation of Polar Plumes at High Solar Altitudes. *C. E. DeForest, S. P. Plunkett, & M. D. Andrews.* 546, 569 (2001)
- Coronal Inflows and the Sun's Nonaxisymmetric Open Flux. *N. R. Sheeley, Jr., T. N. Knudson, & Y.-M. Wang.* 546, L131 (2001)
- Spatial Structure of Simple Spiky Bursts at Microwave/Millimeter Wavelengths. *M. R. Kundu, S. M. White, K. Shibasaki, T. Sakurai, & V. V. Grechnev.* 547, 1090 (2001)
- On the Evolution of the Solar Photospheric and Coronal Magnetic Field. *Brian N. Handy & Carolus J. Schrijver.* 547, 1100 (2001)
- Huge Coronal Structure and Heating Constraints Determined from SERTS Observations. *D. A. Falconer & J. M. Davila.* 547, 1109 (2001)
- Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiochos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane.* 547, 1116 (2001)
- Plasmoid Formation and Acceleration in the Solar Streamer Belt. *Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli.* 547, 1167 (2001)
- Constraints on the O<sup>5+</sup> Anisotropy in the Solar Corona. *L. Ofman, A. Vinñas, & S. P. Gary.* 547, L175 (2001)
- Wave-driven Turbulent Coronal Heating in Open Field Line Regions: Nonlinear Phenomenological Model. *P. Dmitruk, L. J. Milano, & W. H. Matthaeus.* 548, 482 (2001)
- Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson.* 548, 492 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin.* 548, L81 (2001)
- Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Sawant, & J. A. C. F. Neri.* 548, L87 (2001)
- Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret.* 548, L91 (2001)
- Deriving the Electron Density of the Solar Corona from the Inversion of Total Brightness Measurements. *A. P. Hayes, A. Vourlidas, & R. A. Howard.* 548, 1081 (2001)
- Low-Frequency Radio Observations of the Angular Broadening of the Crab Nebula Due to a Coronal Mass Ejection. *R. Ramesh, C. Kathiravan, & Ch. V. Sastry.* 548, L229 (2001)
- Heavy Ion Abundances and Spectra and the Large Gradual Solar Energetic Particle Event of 2000 July 14. *D. V. Reames, C. K. Ng, & A. J. Tylka.* 548, L233 (2001)

**SUN: CORONAL MASS EJECTIONS (CMES)**

- Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret.* 548, L91 (2001)
- Magnetic Flux Cancellation Associated with the Major Solar Event on 2000 July 14. *Jun Zhang, Jingxiu Wang, & Yuanyong Deng.* 548, L99 (2001)

**SUN: FILAMENTS**

- A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang.* 547, L85 (2001)
- Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang.* 548, 497 (2001)

Magnetic Flux Cancellation Associated with the Major Solar Event on 2000 July 14. *Jun Zhang, Jingxiu Wang, & Yuanyong Deng.* 548, L99 (2001)

#### SUN: FLARES

Clear Evidence of Reconnection Inflow of a Solar Flare. *T. Yokoyama, K. Akita, T. Morimoto, K. Inoue, & J. Newmark.* 546, L69 (2001)

A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang.* 547, L85 (2001)

Spatial Structure of Simple Spiky Bursts at Microwave/Millimeter Wavelengths. *M. R. Kundu, S. M. White, K. Shibasaki, T. Sakurai, & V. V. Grechnev.* 547, 1090 (2001)

A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon.* 547, 1159 (2001)

Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson.* 548, 492 (2001)

Radio Signatures of Coronal Mass Ejection Interaction: Coronal Mass Ejection Cannibalism? *N. Gopalswamy, S. Yashiro, M. L. Kaiser, R. A. Howard, & J.-L. Bougeret.* 548, L91 (2001)

Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer.* 548, L95 (2001)

Magnetic Flux Cancellation Associated with the Major Solar Event on 2000 July 14. *Jun Zhang, Jingxiu Wang, & Yuanyong Deng.* 548, L99 (2001)

#### SUN: GRANULATION

Solar Oscillations and Convection. II. Excitation of Radial Oscillations. *R. F. Stein & Å. Nordlund.* 546, 585 (2001)

#### SUN: INTERIOR

Solar Oscillations and Convection. I. Formalism for Radial Oscillations. *Å. Nordlund & R. F. Stein.* 546, 576 (2001)

Solar Oscillations and Convection. II. Excitation of Radial Oscillations. *R. F. Stein & Å. Nordlund.* 546, 585 (2001)

The Effects of Rotation on the Evolution of Rising Omega Loops in a Stratified Model Convection Zone. *W. P. Abbett, G. H. Fisher, & Y. Fan.* 546, 1194 (2001)

Rotating Convection in  $f$ -Planes: Mean Flow and Reynolds Stress. *Kwing L. Chan.* 548, 1102 (2001)

#### SUN: MAGNETIC FIELDS

Nonlinear Growth of the Three-dimensional Undular Instability of a Horizontal Magnetic Layer and the Formation of Arching Flux Tubes. *Y. Fan.* 546, 509 (2001)

On the Use of Correlations to Determine the Motions and Properties of Mesoscale Magnetic Features in the Solar Photosphere. *Herschel B. Snodgrass & Adam A. Smith.* 546, 528 (2001)

Including the Transition Region in Models of the Large-Scale Solar Corona. *Roberto Lionello, Jon A. Linker, & Zoran Mikić.* 546, 542 (2001)

Magnetic Reconnection Induced by Convective Intensification of Solar Photospheric Magnetic Fields. *Akitsugu Takeuchi & Kazunari Shibata.* 546, L73 (2001)

The Effects of Rotation on the Evolution of Rising Omega Loops in a Stratified Model Convection Zone. *W. P. Abbett, G. H. Fisher, & Y. Fan.* 546, 1194 (2001)

Coronal Inflows and the Sun's Nonaxisymmetric Open Flux. *N. R. Sheeley, Jr., T. N. Knudson, & Y.-M. Wang.* 546, L131 (2001)

Simulations of the Photospheric Magnetic Activity and Outer Atmospheric Radiative Losses of Cool Stars Based on Characteristics of the Solar Magnetic Field. *Carolus J. Schrijver.* 547, 475 (2001)

The Role of Nonlinear Alfvén Waves in Shear Formation during Solar Magnetic Flux Emergence. *Ward Manchester IV.* 547, 503 (2001)

A Rapid Change in Magnetic Connectivity Observed before Filament Eruption and Its Associated Flare. *Jung-Hoon Kim, H. S. Yun, Sangwoo Lee, Jongchul Chae, Philip R. Goode, & Haimin Wang.* 547, L85 (2001)

On the Evolution of the Solar Photospheric and Coronal Magnetic Field. *Brian N. Handy & Carolus J. Schrijver.* 547, 1100 (2001)

Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich.* 547, 1130 (2001)

Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet.* 547, 1148 (2001)

A Source of Energetic Particles Associated with Solar Flares. *X. Y. Wang, C. S. Wu, S. Wang, J. K. Chao, Y. Lin, & Peter H. Yoon.* 547, 1159 (2001)

Plasmoid Formation and Acceleration in the Solar Streamer Belt. *Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli.* 547, 1167 (2001)

Constraints on the  $O^{+5}$  Anisotropy in the Solar Corona. *L. Ofman, A. Vinñas, & S. P. Gary.* 547, L175 (2001)

Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. *Peter A. Sturrock, Mark Weber, Michael S. Wheatland, & Richard Wolfson.* 548, 492 (2001)

Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang.* 548, 497 (2001)

Magnetic Flux Cancellation Associated with the Major Solar Event on 2000 July 14. *Jun Zhang, Jingxiu Wang, & Yuanyong Deng.* 548, L99 (2001)

Exact Solutions for Two-dimensional Steady Magnetic Reconnection in Partially Ionized Plasmas. *H. S. Ji, M. T. Song, & G. L. Huang.* 548, 1087 (2001)

Magnetic Diffusion in Stratified Atmospheres. *E. E. DeLuca & N. E. Hurlburt.* 548, 1093 (2001)

An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region. *S. W. McIntosh, T. J. Bogdan, P. S. Cally, M. Carlsson, V. H. Hansteen, P. G. Judge, B. W. Lites, H. Peter, C. S. Rosenthal, & T. D. Tarbell.* 548, L237 (2001)

#### SUN: OSCILLATIONS

Solar Oscillations and Convection. I. Formalism for Radial Oscillations. *Å. Nordlund & R. F. Stein.* 546, 576 (2001)

Solar Oscillations and Convection. II. Excitation of Radial Oscillations. *R. F. Stein & Å. Nordlund.* 546, 585 (2001)

MHD Equation of State with Relativistic Electrons. *Zhigang Gong, Werner Däppen, & Ladislav Zejda.* 546, 1178 (2001)

Lagrangian and Eulerian Stratifications of Acoustic Oscillations through the Solar Photosphere. *Inés Rodríguez Hidalgo, Basilio Ruiz Cobo, Manuel Collados, & Luis R. Bellot Rubio.* 547, 491 (2001)

A Note on Helioseismic Tomography. *S. D'Silva.* 547, L81 (2001)

Energy Distribution of Solar Oscillation Modes Inferred from Space-based Measurements. *M. F. Woodard, S. G. Korzenik, M. C. Rabello-Soares, P. Kumar, T. D. Tarbell, & S. Action.* 548, L103 (2001)

Time-Distance Helioseismology at High Frequencies. *S. D'Silva.* 548, L107 (2001)

#### SUN: PARTICLE EMISSION

Heavy Ion Abundances and Spectra and the Large Gradual Solar Energetic Particle Event of 2000 July 14. *D. V. Reames, C. K. Ng, & A. J. Tylka.* 548, L233 (2001)

#### SUN: PHOTOSPHERE

The Importance of Fe I as a Continuous Opacity Source in the Solar Atmosphere. *Roger A. Bell, Suchitra C. Balachandran, & Manuel Bautista.* 546, L65 (2001)

Magnetic Reconnection Induced by Convective Intensification of Solar Photospheric Magnetic Fields. *Akitsugu Takeuchi & Kazunari Shibata.* 546, L73 (2001)

Lagrangian and Eulerian Stratifications of Acoustic Oscillations through the Solar Photosphere. *Inés Rodríguez Hidalgo, Basilio Ruiz Cobo, Manuel Collados, & Luis R. Bellot Rubio.* 547, 491 (2001)

Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich.* 547, 1130 (2001)

Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet.* 547, 1148 (2001)

Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang.* 548, 497 (2001)

#### SUN: PROMINENCES

Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations. *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiochos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane.* 547, 1116 (2001)

Small Magnetic Bipoles Emerging in a Filament Channel. *Jongchul Chae, Sara F. Martin, H. S. Yun, Junghoon Kim, Sangwoo Lee, Philip R. Goode, Tom Spirock, & Haimin Wang.* 548, 497 (2001)

- ## SUN: RADIO RADIATION

- Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Sawant, & J. A. C. F. Neri*. 548, L87 (2001)

- Fast Brightenings at Submillimeter Waves Only Associated with a Large Solar Flare. *Pierre Kaufmann, J. P. Raulin, E. Correia, J. E. R. Costa, C. G. Gimenez de Castro, A. V. R. Silva, H. Levato, & O. H. Bauer.* 548, L95 (2001)

- ## SUN: ROTATION

- The Importance of Fe I as a Continuous Opacity Source in the Solar Atmosphere. *Roger A. Bell, Suchitra C. Balachandran, & Manuel Bautista.* 546, L65 (2001)

- Discovery of Variation in Solar Coronal Rotation with Altitude. *Hari Om Vats, J. R. Cecatto, M. Mehta, H. S. Sawant, & J. A. C. F. Neri*. 548, L87 (2001)

- Rotating Convection in  $f$ -Planes: Mean Flow and Reynolds Stress. *Kwing L. Chan*, 548, 1102 (2001)

## SUN: SOLAR-TERRESTRIAL RELATIONS

- Low-Frequency Radio Observations of the Angular Broadening of the Crab Nebula Due to a Coronal Mass Ejection. *R. Ramesh, C. Kathiravan, & Ch. V. Sastri*. 548, L229 (2001)

**SUN: SOLAR WIND**

- Plasmoid Formation and Acceleration in the Solar Streamer Belt. *Giorgio Einaudi, Sergio Chibaro, Russell B. Dahlburg, & Marco Velli.* 547, 1167 (2001)

- Magnetoinertial Oscillations of Jupiter's Inner Radiation Belt. *Yu-Qing Lou*. 548, 460 (2001)

## SUN: SUNSPOTS

- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet. 547. 1148 (2001)

### SUN: TRANSITION REGION

- An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region. *S. W. McIntosh, T. J. Bogdan, P. S. Cally, M. Carlsson, V. H. Hansteen, P. G. Judge, B. W. Lites, H. Peter, C. S. Rosenthal, & T. D. Tarbell.* 548, L237 (2001)

### SUN: UV RADIATION

- The Importance of Fe I as a Continuous Opacity Source in the Solar Atmosphere. Roger A. Bell, Suchitra C. Balachandran, & Manuel Bautista. 546. L65 (2001)

- On the Evolution of the Solar Photospheric and Coronal Magnetic Field.  
*Brian N. Handy & Carolus J. Schrijver. 547, 1100 (2001)*

- Huge Coronal Structure and Heating Constraints Determined from SERTS Observations.** *D. A. Falconer & J. M. Davila.* 547, 1109 (2001)

- Extreme-Ultraviolet Transition-Region Line Emission during the Dynamic Formation of Prominence Condensations.** *Antonino F. Lanza, Daniele Spadaro, Alessandro C. Lanzafame, Spiro K. Antiochos, Peter J. MacNeice, Daniel S. Spicer, & Martin G. O'Mullane.* 547, 1116 (2001)

- An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region. *S. W. McIntosh, T. J. Bogdan, P. S. Cally, M. Carlsson, V. H. Hansteen, P. G. Judge, B. W. Lites, H. Peter, C. S. Rosenthal, & T. D. Tarbell*. 548, L237 (2001)

## SURVEYS

- Radio-quiet Quasars in the Direction of the Northern Hubble Deep Field.  
*Chris Impey & Cathy Petry.* 547, 117 (2001)

- Discovery of Two Relativistic Neutron Star–White Dwarf Binaries. R. T. Edwards & M. Bailes. 547, L37 (2001)

- The Low-Redshift Quasar-Quasar Correlation Function from an Extragalactic H $\alpha$  Emission-Line Survey to  $z = 0.4$ . C. N. Sabbey, A. Oemler, P. Coppi, C. Baltay, A. Bongiovanni, G. Bruzual, C. E. Garcia, J. Musser, A. W. Rengstorf, & J. A. Snyder. 548, 585 (2001)

- Structure of the Large Magellanic Cloud from 2MASS. *Martin D. Weinberg & Sergei Nikolaev*. 548. 712 (2001)

- Discovery of the Bright Trans-Neptunian Object 2000 EB<sub>173</sub>. Ignacio Ferrin,  
D. Rabinowitz, B. Schaefer, J. Snyder, N. Ellman, B. Vicente, A. Rengstorf,  
D. Depoy, S. Salim, P. Andrews, C. Bailyn, C. Baltay, C. Briceno,  
P. Coppi, M. Deng, W. Emmet, A. Oemler, C. Sabbe, J. Shin, S. Sofia,  
W. van Altena, K. Vivas, C. Abad, A. Bongiovanni, G. Bruzual, F. Della  
Prugna, D. Herrera, G. Magris, J. Mateu, R. Pacheco, Ge. Sanchez, Gu.  
Sanchez, H. Schenner, J. Stock, K. Vieira, F. Fuenmayor, J. Hernandez,  
O. Naranjo, P. Rosenzweig, C. Secco, G. Spavieri, M. Gebhard,  
K. Honeycutt, S. Mufson, J. Musser, S. Pravdo, E. Helin, & K. Lawrence.  
548, L243 (2001)

**TECHNIQUES: IMAGE PROCESSING**

- The SIGMA/Granat Telescope: Calibration and Data Reduction. *L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul.* 548, 990 (2001)

**TECHNIQUES: INTERFEROMETRIC**

- Estimates of the Free-Free Optical Depth toward the Subparsec-Scale Radio Source in Centaurus A. *S. J. Tingay & D. W. Murphy*, 546, 210 (2001)

- Spatially Resolved Circumstellar Structure of Herbig Ae/Be Stars in the Near-Infrared.** *Rafael Millan-Gabet, F. Peter Schloerb, & Wesley A. Traub.* 546, 358 (2001)

- VLBI Space Observatory Programme Observation of the Quasar  
PKS 2215+020: A New Laboratory for Core-Jet Physics at  
 $z = 3.572$ . A. P. Lobanov, L. I. Gurvits, S. Frey, R. T. Schilizzi,  
N. Kawaguchi, & J. I. K. Pauliny-Toth. 547, 714 (2001)

- A Preliminary Visual Orbit of BY Draconis. A. F. Boden & B. F. Lane. 547, 1071 (2001)

- Detection of Earth-like Planets Using Apodized Telescopes. *Peter Nisenson & Costas Papaliolios*. 548, L201 (2001)

**TECHNIQUES: POLARIMETRIC**

- The Hanle Effect as a Diagnostic of Magnetic Fields in Stellar Envelopes. III. Including the Finite Star Depolarization Effect. *R. Ignace.* 547, 393 (2001)

- Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification.** *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich.* 547, 1130 (2001)

- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet. 547, 1148 (2001)

**TECHNIQUES: SPECTROSCOPIC**

- Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the *Chandra* LETGS Spectrum of X0614+091. *Frits Paerels, A. C. Brinkman, R. L. J. van der Meer, J. S. Kaastra, E. Kuulkers, A. J. F. den Boggende, P. Predehl, Jeremy J. Drake, Steven M. Kahn, Daniel W. Savin, & Brendan M. McLaughlin.* 546, 338 (2001)



- Optical Tomography of a Sunspot. II. Vector Magnetic Field and Temperature Stratification. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, V. Martínez Pillet, B. W. Lites, & A. Skumanich.* 547, 1130 (2001)
- Optical Tomography of a Sunspot. III. Velocity Stratification and the Evershed Effect. *C. Westendorp Plaza, J. C. del Toro Iniesta, B. Ruiz Cobo, & V. Martínez Pillet.* 547, 1148 (2001)
- The Abundances of Solid  $N_2$  and Gaseous  $CO_2$  in Interstellar Dense Molecular Clouds. *S. A. Sandford, M. P. Bernstein, L. J. Allamandola, D. Goorvitch, & T. C. V. S. Teixeira.* 548, 836 (2001)
- ### TELESCOPES
- The SIGMA/Granat Telescope: Calibration and Data Reduction. *L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul.* 548, 990 (2001)
- ### TURBULENCE
- Gravitational Collapse in Turbulent Molecular Clouds. II. Magnetohydrodynamical Turbulence. *Fabian Heitsch, Mordecai-Mark Mac Low, & Ralf S. Klessen.* 547, 280 (2001)
- The Effects of Noise and Sampling on the Spectral Correlation Function. *Paolo Padoan, Erik W. Rosolowsky, & Alyssa A. Goodman.* 547, 862 (2001)
- Magnetic Field-Line Wandering and Shock Front Acceleration: Application to the Radio Emission of SN 1987A. *B. R. Rago.* 547, 1010 (2001)
- Random Scattering and Anisotropic Turbulence of Shear-Alfvén Wave Packets. *A. Bhattacharjee & C. S. Ng.* 548, 318 (2001)
- Wave-driven Turbulent Coronal Heating in Open Field Line Regions: Nonlinear Phenomenological Model. *P. Dmitruk, L. J. Milano, & W. H. Matthaeus.* 548, 482 (2001)
- Energy Distribution of Solar Oscillation Modes Inferred from Space-based Measurements. *M. F. Woodard, S. G. Korzenik, M. C. Rabello-Soares, P. Kumar, T. D. Tarbell, & S. Action.* 548, L103 (2001)
- A Fractal Analysis of the H I Emission from the Large Magellanic Cloud. *Bruce G. Elmegreen, Sungeun Kim, & Lister Staveley-Smith.* 548, 749 (2001)
- ### ULTRAVIOLET: GALAXIES
- Far-Ultraviolet Imagery of the Edge-on Spiral Galaxy NGC 4631. *Andrew M. Smith, Nicholas R. Collins, William H. Waller, Morton S. Roberts, Denise A. Smith, Ralph C. Bohlin, K.-P. Cheng, Michael N. Fanelli, Susan G. Neff, Robert W. O'Connell, Ronald A. Parise, Eric P. Smith, & Theodore P. Stecher.* 546, 829 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. I. Spectral Analysis. *I. Cagnoni & A. Fruscione.* 546, 877 (2001)
- Four Years of Extreme Ultraviolet Observations of Markarian 421. II. Temporal Analysis. *I. Cagnoni, I. E. Papadakis, & A. Fruscione.* 546, 886 (2001)
- Ultraviolet Spectropolarimetry of Narrow-Line Radio Galaxies. *Makoto Kishimoto, Robert Antonucci, Andrea Cimatti, Todd Hurt, Arjun Dey, Wil van Breugel, & Hyron Spinrad.* 547, 667 (2001)
- A Comparison of Ultraviolet Imaging Telescope Far-Ultraviolet and H $\alpha$  Star Formation Rates. *Eric F. Bell & Robert C. Kennicutt, Jr.* 548, 681 (2001)
- Extreme-Ultraviolet Emission in the Fornax Cluster of Galaxies. *Stuart Bowyer, Eric Korpela, & Thomas Berghöfer.* 548, L135 (2001)
- ### ULTRAVIOLET: GENERAL
- The Contribution of Extreme Ultraviolet from Clusters of Galaxies to the Cosmic Ionizing Background. *Scott W. Randall & Craig L. Sarazin.* 548, 60 (2001)
- ### ULTRAVIOLET: ISM
- Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using Hubble Space Telescope Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank.* 547, L49 (2001)
- STIS and GHRS Observations of Warm and Hot Gas Overlying the Stutum Supershell (GS 018–04+44). *Blair D. Savage, Kenneth R. Sembach, & J. Christopher Howk.* 547, 907 (2001)
- Rapid Temporal Variations of Interstellar Absorption Lines in the Carina Nebula. *Anthony C. Danks, Nolan R. Walborn, Gladys Vieira, Wayne B. Landsman, Joel Gales, & Beatriz Garcia.* 547, L155 (2001)
- ### ULTRAVIOLET: STARS
- Observational Estimates for the Mass-Loss Rates of  $\alpha$  Centauri and Proxima Centauri Using Hubble Space Telescope Ly $\alpha$  Spectra. *Brian E. Wood, Jeffrey L. Linsky, Hans-Reinhard Müller, & Gary P. Zank.* 547, L49 (2001)
- Non-LTE Modeling of Nova Cygni 1992. *C. Ian Short, Peter H. Hauschildt, S. Starrfield, & E. Baron.* 547, 1057 (2001)
- Boron Abundances in Early B Stars: Results from the B III Resonance Line in IUE Data. *Charles R. Proffitt & Mark F. Quigley.* 548, 429 (2001)
- Tomographic Separation of Composite Spectra. VII. The Physical Properties of the Massive Triple System HD 135240 ( $\delta$  Circini). *Laura R. Penny, Debra Seyle, Douglas R. Gies, James A. Harvin, William G. Bagnuolo, Jr., M. L. Thaller, A. W. Fullerton, & L. Kaper.* 548, 889 (2001)
- ### WAVES
- Magnetic Reconnection Induced by Convective Intensification of Solar Photospheric Magnetic Fields. *Akitsu Takeuchi & Kazunari Shibata.* 546, L73 (2001)
- Reconnection in a Striped Pulsar Wind. *Y. Lyubarsky & J. G. Kirk.* 547, 437 (2001)
- Constraints on the O $^{+5}$  Anisotropy in the Solar Corona. *L. Ofman, A. Viññas, & S. P. Gary.* 547, L175 (2001)
- Random Scattering and Anisotropic Turbulence of Shear-Alfvén Wave Packets. *A. Bhattacharjee & C. S. Ng.* 548, 318 (2001)
- Magnetoinertial Oscillations of Jupiter's Inner Radiation Belt. *Yu-Qing Lou.* 548, 460 (2001)
- Note on an Exact Solution for Magnetoatmospheric Waves. *P. S. Cally.* 548, 473 (2001)
- ### X-RAYS: BURSTS
- Relativistic Iron Emission and Disk Reflection in Galactic Microquasar XTE J1748–288. *J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin.* 546, 1055 (2001)
- Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. *S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan.* 546, 1075 (2001)
- Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars. *Nevin Weinberg, M. Coleman Miller, & Donald Q. Lamb.* 546, 1098 (2001)
- X-Ray Spectral Features from Gamma-Ray Bursts: Predictions of Progenitor Models. *Markus Böttcher & Chris L. Fryer.* 547, 338 (2001)
- ### X-RAYS: GALAXIES
- The Evolution of X-Ray Clusters and the Entropy of the Intracluster Medium. *Paolo Tozzi & Colin Norman.* 546, 63 (2001)
- Iron Abundance Profiles of 12 Clusters of Galaxies Observed with BeppoSAX. *Jimmy A. Irwin & Joel N. Bregman.* 546, 150 (2001)
- X-Ray Imaging of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, W. N. Brandt, G. Chartas, Hagai Netzer, S. Kaspi, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L9 (2001)
- High-Resolution X-Ray Spectroscopy of the Seyfert 2 Galaxy Circinus with Chandra. *Rita M. Sambruna, Hagai Netzer, Shai Kaspi, W. N. Brandt, G. Chartas, G. P. Garmire, John A. Nousek, & K. A. Weaver.* 546, L13 (2001)
- X-Ray Measurements of the Field and Particle Energy Distributions in the West Lobe of the Radio Galaxy NGC 1316 (Fornax A). *M. Tashiro, K. Makishima, N. Iyomoto, N. Isobe, & H. Kaneda.* 546, L19 (2001)
- Physical Diagnostics from a Narrow Fe K $\alpha$  Emission Line Detected by Chandra in the Seyfert 1 Galaxy NGC 5548. *T. Yaqoob, I. M. George, K. Nandra, T. J. Turner, P. J. Serlemitsos, & R. F. Mushotzky.* 546, 759 (2001)
- Heavy X-Ray Absorption in Soft X-Ray–Weak Active Galactic Nuclei. *S. C. Gallagher, W. N. Brandt, A. Laor, M. Elvis, S. Mathur, Beverley J. Wills, & N. Iyomoto.* 546, 795 (2001)
- The Orbital Structure of Dark Matter Halos with Gas. *Andisheh Mahdavi.* 546, 812 (2001)
- Detection of Excess Hard X-Ray Emission from the Group of Galaxies HCG 62. *Yasushi Fukazawa, Kazuhiro Nakazawa, Naoki Isobe, Kazuo Makishima, Kyoko Matsushita, Takaya Ohashi, & Tsuneyoshi Kamae.* 546, L87 (2001)
- Detection of X-Ray Emission from Galaxies inside the Bootes Void. *Chulhee Kim, Th. Boller, Kajal K. Ghosh, Douglas A. Swartz, & Brian D. Ramsey.* 546, L91 (2001)
- Radial Density and Temperature Profiles of the Intracluster Gas Constructed Jointly from the X-Ray Surface Brightness Measurement and the Universal Density Profile. *Xiang-Ping Wu & Tzihong Chiueh.* 547, 82 (2001)
- Emission Mechanisms in X-Ray–faint Galaxies. *Beth A. Brown & Joel N. Bregman.* 547, 154 (2001)
- Discovery of a Luminous, Variable, Off-Center Source in the Nucleus of M82 with the Chandra High-Resolution Camera. *H. Matsumoto, T. G. Tsuru,*

- K. Koyama, H. Awaki, C. R. Canizares, N. Kawai, S. Matsushita, & R. Kawabe. 547, L25 (2001)
- A Serendipitous Galaxy Cluster Survey with XMM: Expected Catalog Properties and Scientific Applications. A. Kathy Romer, Pedro T. P. Viana, Andrew R. Liddle, & Robert G. Mann. 547, 594 (2001)
- Deep Near-Infrared Luminosity Function of a Cluster of Galaxies at  $z = 0.3$ . S. Andreon. 547, 623 (2001)
- Estimation of Relativistic Accretion Disk Parameters from Iron Line Emission. V. I. Pariev, B. C. Bromley, & W. A. Miller. 547, 649 (2001)
- An RXTE Survey of Long-Term X-Ray Variability in Seyfert 1 Galaxies. A. Markowitz & R. Edelson. 547, 684 (2001)
- Origin of the Scatter in the X-Ray Luminosity of Early-Type Galaxies Observed with ROSAT. Kyoko Matsushita. 547, 693 (2001)
- Velocity Gradients in the Intracluster Gas of the Perseus Cluster. Renato A. Dupke & Joel N. Bregman. 547, 705 (2001)
- RXTE Investigation into Extended Hard X-Ray Emission from Elliptical Galaxies. Michael Loewenstein, Azita Valinia, & Richard F. Mushotzky. 547, 722 (2001)
- Chandra X-Ray Observations of Pictor A: High-Energy Cosmic Rays in a Radio Galaxy. A. S. Wilson, A. J. Young, & P. L. Shopbell. 547, 740 (2001)
- Chandra Observation of M84, a Radio Lobe Elliptical Galaxy in the Virgo Cluster. A. Finoguenov & C. Jones. 547, L107 (2001)
- Discovery of Spectral Transitions from Two Ultraluminous Compact X-Ray Sources in IC 342. A. Kubota, T. Mizuno, K. Makishima, Y. Fukazawa, J. Kotoku, T. Ohnishi, & M. Tashiro. 547, L119 (2001)
- Evolution of the Internal Dynamics of Galaxy Clusters. Marisa Girardi & Marino Mezzetti. 548, 79 (2001)
- Central Elemental Abundance Ratios in the Perseus Cluster: Resonant Scattering or SN Ia Enrichment? Renato A. Dupke & Keith A. Arnaud. 548, 141 (2001)
- X-Ray Images of Hot Accretion Flows. Feryal Özel & Tiziana Di Matteo. 548, 213 (2001)
- New Evidence for the Unified Scheme of BL Lacertae Objects and FR I Radio Galaxies. J. M. Bai & Myung Gyoan Kim. 548, 244 (2001)
- Chandra Grating Spectroscopy of the Seyfert Galaxy Ton S180. T. J. Turner, I. M. George, T. Yaqoob, G. Kriss, D. M. Crenshaw, S. Kraemer, W. Zheng, J. Wang, & K. Nandra. 548, L13 (2001)
- The Beta Problem: A Study of Abell 262. James D. Neill, Jean P. Brodie, William W. Craig, Charles J. Hailey, & Anthony A. Misch. 548, 550 (2001)
- Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters. M. Cappi, P. Mazzotta, M. Elvis, D. J. Burke, A. Comastri, F. Fiore, W. Forman, A. Fruscione, P. Green, D. Harris, E. J. Hooper, C. Jones, J. S. Kaastra, E. Kellogg, S. Murray, B. McNamara, F. Nicastro, T. J. Ponman, E. M. Schlegel, A. Siemiginowska, H. Tananbaum, A. Vikhlinin, S. Virani, & B. Wilkes. 548, 624 (2001)
- Oxygen Absorption in M87: Evidence for a Warm+Hot Interstellar Medium. David A. Buote. 548, 652 (2001)
- Evidence for Rapid Iron K $\alpha$  Line Flux Variability in MGC –6-30-15. Simon Vaughan & Rick Edelson. 548, 694 (2001)
- Are There Advection-dominated Accretion Flows in Nearby Giant Elliptical Galaxies? Martin E. Sulkanen & Joel N. Bregman. 548, L131 (2001)
- X-RAYS: GENERAL**
- Four Measures of the Intracluster Medium Temperature and Their Relation to a Cluster's Dynamical State. B. F. Mathiesen & A. E. Evrard. 546, 100 (2001)
- Accretion Disk Models and Their X-Ray Reflection Signatures. I. Local Spectra. Sergei Nayakshin & Timothy R. Kallman. 546, 406 (2001)
- Observational Signatures of X-Ray-irradiated Accretion Disks. C. Done & S. Nayakshin. 546, 419 (2001)
- A Possible X-Ray and Radio Counterpart of the High-Energy Gamma-Ray Source 3EG J2227+6122. J. P. Halpern, E. V. Gotthelf, K. M. Leighly, & D. J. Helfand. 547, 323 (2001)
- A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba. 547, 412 (2001)
- Probing the Inner Region of Cygnus X-1 in the Low/Hard State through Its X-Ray Broadband Spectrum. T. Di Salvo, C. Done, P. T. Zycki, L. Burderi, & N. R. Robba. 547, 1024 (2001)
- A New Radio-X-Ray Probe of Galaxy Cluster Magnetic Fields. T. E. Clarke, P. P. Kronberg, & Hans Bohringer. 547, L111 (2001)
- Two New Ejecta-dominated Galactic Supernova Remnants: G337.2–0.7 and G309.2–0.6. Cara E. Rakowski, John P. Hughes, & Patrick Slane. 548, 258 (2001)
- Discovery of a Very X-Ray Luminous Galaxy Cluster at  $z = 0.89$  in the Warps Survey. Harald Ebeling, L. R. Jones, B. W. Fairley, E. Perlman, C. Scharf, & D. Horner. 548, L23 (2001)
- Chandra Study of an Overdensity of X-Ray Sources around Two Distant ( $z \sim 0.5$ ) Clusters. M. Cappi, P. Mazzotta, M. Elvis, D. J. Burke, A. Comastri, F. Fiore, W. Forman, A. Fruscione, P. Green, D. Harris, E. J. Hooper, C. Jones, J. S. Kaastra, E. Kellogg, S. Murray, B. McNamara, F. Nicastro, T. J. Ponman, E. M. Schlegel, A. Siemiginowska, H. Tananbaum, A. Vikhlinin, S. Virani, & B. Wilkes. 548, 624 (2001)
- Radio Halo and Relic Candidates from the Westerbork Northern Sky Survey. Joshua C. Kempner & Craig L. Sarazin. 548, 639 (2001)
- Simulations of Accretion Flows Crossing the Last Stable Orbit. Philip J. Armitage, Christopher S. Reynolds, & James Chiang. 548, 868 (2001)
- A Hard Tail in the Broadband Spectrum of the Dipper XB 1254–690. R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba. 548, 883 (2001)
- The SIGMA/Granat Telescope: Calibration and Data Reduction. L. Bouchet, J. P. Roques, J. Ballet, A. Goldwurm, & J. Paul. 548, 990 (2001)
- The Formal Underpinnings of the Response Functions Used in X-Ray Spectral Analysis. John P. Davis. 548, 1010 (2001)
- Confusion of Diffuse Objects in the X-Ray Sky. G. Mark Voit, August E. Evrard, & Greg L. Bryan. 548, L123 (2001)
- X-RAYS: ISM**
- Emission Mechanisms in X-Ray-faint Galaxies. Beth A. Brown & Joel N. Bregman. 547, 154 (2001)
- Origin of the Scatter in the X-Ray Luminosity of Early-Type Galaxies Observed with ROSAT. Kyoko Matsushita. 547, 693 (2001)
- A Critical Examination of Hypervelocity Remnant Candidates in M101. I. MF 83. Shih-Ping Lai, You-Hua Chu, C. H. Rosie Chen, Robin Ciardullo, & Eva K. Grebel. 547, 754 (2001)
- ASCA Observation of an "X-Ray Shadow" in the Galactic Plane. Sangwook Park & Ken Ebisawa. 547, 777 (2001)
- A Monte Carlo Study of the 6.4 keV Emission at the Galactic Center. Michael J. Fromerth, Fulvio Melia, & Denis A. Leahy. 547, L129 (2001)
- RJX 0852.0–0462: Another Nonthermal Shell-Type Supernova Remnant (G266.2–1.2). Patrick Slane, John P. Hughes, Richard J. Edgar, Paul P. Plucinsky, Emi Miyata, Hiroshi Tsunemi, & Bernd Aschenbach. 548, 814 (2001)
- Supernova Remnants in the Sedov Expansion Phase: Thermal X-Ray Emission. Kazimierz J. Borkowski, William J. Lyerly, & Stephen P. Reynolds. 548, 820 (2001)
- X-Ray Constraints on the Warm-Hot Intergalactic Medium. K. D. Kuntz, S. L. Snowden, & R. F. Mushotzky. 548, L119 (2001)
- X-RAYS: STARS**
- Interstellar X-Ray Absorption Spectroscopy of Oxygen, Neon, and Iron with the Chandra LETGS Spectrum of X0614+091. Frits Paerels, A. C. Brinkman, R. L. J. van der Meer, J. S. Kaastra, E. Kuulkers, A. J. F. den Boggende, P. Predehl, Jeremy J. Drake, Steven M. Kahn, Daniel W. Savin, & Brendan M. McLaughlin. 546, 338 (2001)
- Synchrotron Model for the Infrared, Optical, and X-Ray Emission of the Crab Pulsar. André R. Crusius-Wätzell, Thomas Kunz, & Harald Lesch. 546, 401 (2001)
- The Orbit of X Persei and Its Neutron Star Companion. Hugo Delgado-Martí, Alan M. Levine, Eric Pfahl, & Saul A. Rappaport. 546, 455 (2001)
- Observability of Stellar Winds from Late-Type Dwarfs via Charge Exchange X-Ray Emission. Bradford J. Wargelin & Jeremy J. Drake. 546, L57 (2001)
- Broadband Spectrum of Cygnus X-1 in Two Spectral States with BeppoSAX. F. Frontera, E. Palazzi, A. A. Zdziarski, F. Haardt, G. C. Perola, L. Chiappetti, G. Cusumano, D. Dal Fiume, S. Del Sordo, M. Orlandini, A. N. Parmar, L. Piro, A. Santangelo, A. Segreto, A. Treves, & M. Trifoglio. 546, 1027 (2001)
- Relativistic Iron Emission and Disk Reflection in Galactic Microquasars XTE J1748–288. J. M. Miller, D. W. Fox, T. Di Matteo, R. Wijnands, T. Belloni, D. Pooley, C. Kouveliotou, & W. H. G. Lewin. 546, 1055 (2001)
- Detection of a Series of X-Ray Dips Associated with a Radio Flare in GRS 1915+105. S. Naik, P. C. Agrawal, A. R. Rao, B. Paul, S. Seetha, & K. Kasturirangan. 546, 1075 (2001)

- Optical Observations of the Black Hole Candidate XTE J1550–564 during Reflare and Quiescence. *Raj K. Jain, Charles D. Bailyn, Jerome A. Orosz, Jeffrey E. McClintock, Gregory J. Sobczak, & Ronald A. Remillard.* 546, 1086 (2001)
- Study of the Temporal Behavior of 4U 1728–34 as a Function of Its Position in the Color-Color Diagram. *T. Di Salvo, M. Mendez, M. van der Klis, E. Ford, & N. R. Robba.* 546, 1107 (2001)
- Chandra Observations of the Young Pulsar PSR B0540–69. *P. Kaaret, H. L. Marshall, T. L. Aldcroft, D. E. Graessle, M. Karovska, S. S. Murray, A. H. Rots, N. S. Schulz, & F. D. Seward.* 546, 1159 (2001)
- The Correlated Intensity and Spectral Evolution of Cygnus X-1 during State Transitions. *Lingling Wen, Wei Cui, & Hale V. Bradt.* 546, L105 (2001)
- Accretion Disk Boundary Layers around Neutron Stars: X-Ray Production in Low-Mass X-Ray Binaries. *Robert Popham & Rashid Sunyaev.* 547, 355 (2001)
- A Hard Tail in the X-Ray Broadband Spectrum of Circinus X-1 at the Periastron: A Peculiar Z Source. *R. Iaria, L. Burderi, T. Di Salvo, A. La Barbera, & N. R. Robba.* 547, 412 (2001)
- ASCA Observations of GX 354–0 and KS 1731–260. *T. Narita, J. E. Grindlay, & D. Barret.* 547, 420 (2001)
- Ginga Observations of Hercules X-1: Spectrum Dependence on 35 Day Phase. *D. A. Leahy.* 547, 449 (2001)
- The X-Ray Photoionized Wind in Cen X-3/V779 Cen. *Patrick S. Wojdowski, Duane A. Liedahl, & Masao Sako.* 547, 973 (2001)
- Probing the Inner Region of Cygnus X-1 in the Low/Hard State through Its X-Ray Broadband Spectrum. *T. Di Salvo, C. Done, P. T. Zycki, L. Burderi, & N. R. Robba.* 547, 1024 (2001)
- The X-Ray Light Curve of  $\eta$  Carinae: Refinement of the Orbit and Evidence for Phase-dependent Mass Loss. *M. F. Corcoran, K. Ishibashi, J. H. Swank, & R. Petre.* 547, 1034 (2001)
- Chandra Observations of the Open Cluster NGC 2516. *F. R. Harnden, Jr., N. R. Adams, F. Damiani, J. J. Drake, N. R. Evans, F. Favata, E. Flaccomio, P. Freeman, R. D. Jeffries, V. Kashyap, G. Micela, B. M. Patten, N. Pizzolato, J. F. Schachter, S. Sciortino, J. Stauffer, S. J. Wolk, & M. V. Zombeck.* 547, L141 (2001)
- High-Energy X-Ray Timing Experiment Detections of Hard X-Ray Tails in Scorpius X-1. *Flavio D'Amico, William A. Heindl, Richard E. Rothschild, & Duane E. Gruber.* 547, L147 (2001)
- Pulse Characteristics of the X-Ray Pulsar 4U 1907+09. *K. Mukerjee, P. C. Agrawal, B. Paul, A. R. Rao, J. S. Yadav, S. Seetha, & K. Kasturirangan.* 548, 368 (2001)
- Peculiar Extended X-Ray Emission around the Radio-loud Black Hole Candidate 1E 1740.7–2942. *Wei Cui, N. S. Schulz, F. K. Baganoff, M. W. Bautz, J. P. Doty, G. P. Garmire, I. F. Mirabel, G. R. Ricker, L. F. Rodríguez, & S. C. Taylor.* 548, 394 (2001)
- The X-Ray Properties of Low-Frequency Quasi-periodic Oscillations from GRS 1915+105 up to 120 keV. *John A. Tomsick & Philip Kaaret.* 548, 401 (2001)
- Discovery of an Outburst and Pulsed X-Ray Flux from SMC X-2 from RXTE Observations. *R. H. D. Corbet, F. E. Marshall, M. J. Coe, S. Laycock, & G. Handler.* 548, L41 (2001)
- Chandra Discovers a Very High Density X-Ray Plasma on the O Star  $\zeta$  Orionis. *Wayne L. Waldron & Joseph P. Cassinelli.* 548, L45 (2001)
- Enhanced Noble Gases in the Coronae of Active Stars. *Jeremy J. Drake, Nancy S. Brickhouse, Vinay Kashyap, J. Martin Laming, David P. Huenemoerder, Randall Smith, & Bradford J. Wargelin.* 548, L81 (2001)
- The Central X-Ray Point Source in Cassiopeia A. *Depto Chakrabarty, Michael J. Pivovarov, Lars E. Hernquist, Jeremy S. Heyl, & Ramesh Narayan.* 548, 800 (2001)
- New Optical Constraints on the Presence of a Compact Central Object in Cassiopeia A. *Erin Ryan, R. Mark Wagner, & Sumner G. Starrfield.* 548, 811 (2001)
- Disk-Jet Connection in the Microquasar GRS 1915+105 and Infrared and Radio Emission. *J. S. Yadav.* 548, 876 (2001)
- A Hard Tail in the Broadband Spectrum of the Dipper XB 1254–690. *R. Iaria, T. Di Salvo, L. Burderi, & N. R. Robba.* 548, 883 (2001)
- The Chandra Iron L X-Ray Line Spectrum of Capella. *Ehud Behar, Jean Cottam, & Steven M. Kahn.* 548, 966 (2001)
- Charting the Temperature of the Hot Neutron Star in a Soft X-Ray Transient. *Monica Colpi, Ulrich Geppert, Dany Page, & Andrea Possenti.* 548, L175 (2001)